



## MONTHLY MICROCLIMATIC SUMMARY

OCTOBER 1967

## ENVIRONMENTAL DATA BASE FOR REGIONAL STUDIES IN THE HUMID TROPICS

USATECOM Project No. 9-4-0013-01

US ARMY
TROPIC TEST CENTER
Fort Clayton, Canal Zone



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## MONTHLY MICROCLIMATIC SUMMARY

OCTOBER 1967

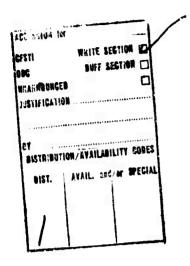
## Prepared by

Michael A. Fradel, Project Officer and Dr. Wilfried H. Portig, Meteorologist USATECOM Project No. 9-4-0013-01

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## MONTHLY MICROCLIMATIC SUMMARY

## Introduction

Monthly microclimatic data summarized in this series of reports were collected by the US Army Tropic Test Center and the Weather Engineers of Panama Corporation under the project, Environmental Data Base for Regional Studies in the Humid Tropics. The project is sponsored by the Advanced Research Projects Agency of the Department of Defense and by the Army Research Office, Office of the Chief of Research and Development. It is an investigation of microclimatic, air chemistry, vegetation, soils, microbiological, and macrofaunal conditions at selected sites in the principal tropical environments of the Panama Canal Zone and the Rio Hato Military Reservation. The objective of the project is to assemble quantitative environmental data for RDT&E purposes.

Sites. Data summarized in this report were collected at the Albrook Forest and Chiva Chiva sites. Figure 1 shows the site locations within the Isthmus of Panama. Geographic coordinates are shown below:

Albrook Forest 09° 01'N, 79° 33'W Chiva Chiva 09° 01'N, 79° 35'W

The Chiva open site and the Albrook Forest site are paired for comparative study of environmental conditions in a tropical semideciduous forest and in a large clearing. Both are located in a region where the annual precipitation is approximately 80 inches and there is a pronounced dry season. The other satellite sites were located primarily for soil studies purposes. Albrook and Fort Kobbe have climatic regimes similar to the principal sites.

The Albrook and Chiva Chiva main sites are approximately four kilometers apart. Each has a 46 meter walk-up tower and an air-conditioned building to house the recording equipment and observers. Both sites are approximately 30 meters above sea level. The top of the forest canopy at the Albrook site is about 26.5 meters above the ground.

Instrumentation. A wide range of climatic elements are measured at the Albrook and Chiva Chiva sites. Types of observations and frequencies are shown on Figure 2. The towers at the Albrook and Chiva Chiva sites are similarly oriented. Sensing equipment is mounted at several levels on the towers to provide measurements through the vertical profile. Additional instruments are emplaced in the immediate vicinity on or near the ground. All instrument exposures are duplicated at each site. Figures 3, 4, and 5 show the instrument array at these sites.

Data Reduction and Storage. All data, as applicable, are recorded at or reduced to each full hour and transposed to punch cards. These punch cards, together with all raw data, are stored in the Tropic Test Center Technical Library Annex.

The relative humidity data contained in this report required some adjustment due to the difficult problems in maintaining hair hygiometers in the humid tropics. The hygrometers show saturation at a time when the psychrometer shows a relative humidity well below 100%. For this reason the hourly measurements made by means of a hair hygrometer have been modified on the basis of simultaneous psychrometer readings of other levels. Details will be given in the fourth Semiannual Report. It can be assumed that the means of relative humidity presented in this volume are very close to the true means.

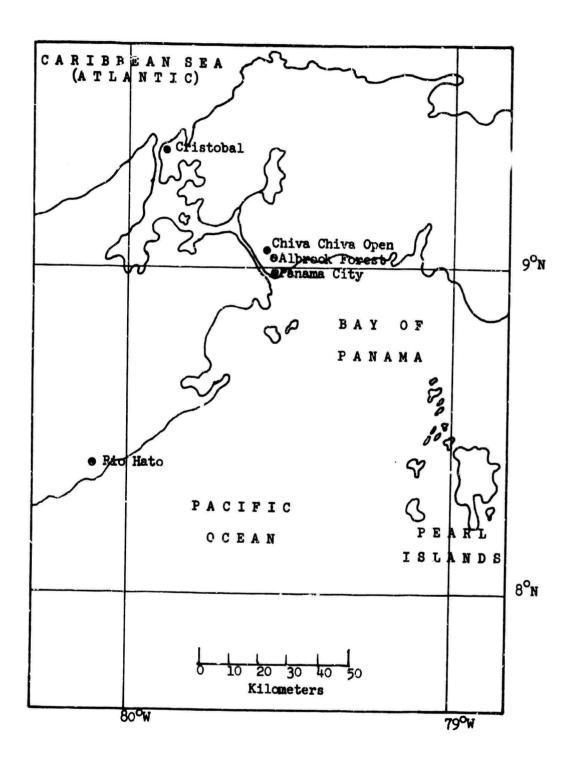


FIGURE 1. LOCATION MAP, ISTHMUS OF PANAMA

FIGURE 2. FREQUENCY OF OBSERVATIONS,

| Frequency | Hourly*<br>Hourly*<br>Once Daily             | Hourly*           | Continuously        | Once Daily  | Continuously<br>4 Times Daily                   | Continuously<br>Hourly      |
|-----------|--|-------------------|---------------------|-------------|---|-----------------------------|
| 16.0 F    | H HO   | 1 Ho              | <sub>1</sub>        | S<br>S      | ე<br>ი :  | 6 6<br>6 6                  |
| 39.0      |  | •                 |                     | 1           | 1 1   | N I                         |
| 26.5      |  | ٦                 | •                   | N           |   | нн                          |
| 13.5      | 4  | т                 | •                   | N           | 1 1   | ۱۳                          |
| 8.0       |  | ı                 | 1                   | •           | 1 1   | 1 1                         |
| 0.4       | N N 1  | N                 | ı                   | •           | 1 1   | ႕႕                          |
| 2.0       | યતા !  | N                 | ı                   | ł           | 1 1   | ım                          |
| 1.0       | H 1 1  | N                 | н                   | ı           | Н С   | 1 1                         |
| 0.5       | dd 1   | н                 | 1                   | ч           | 1 1   | 1 1                         |
| Sfc       | ווה  | 1                 | 1                   | ı           | ì   | 1 1                         |
| # Element | Temperature: Dry Bulb Wet Bulb Grass Minimum | Relative Humidity | Barometric Pressure | Evaporation | Precipitation:<br>Recording Gage<br>Manual Gage | Wind:<br>Direction<br>Speed |

\* Observations sude with sling psychrometer when recorders are inoperative.

Albrook and Chiva Chiva Albrook only Chiva Chiva only

4 % %

Instrument descriptions are contained in the Environmental Data Base Semiannual reports.

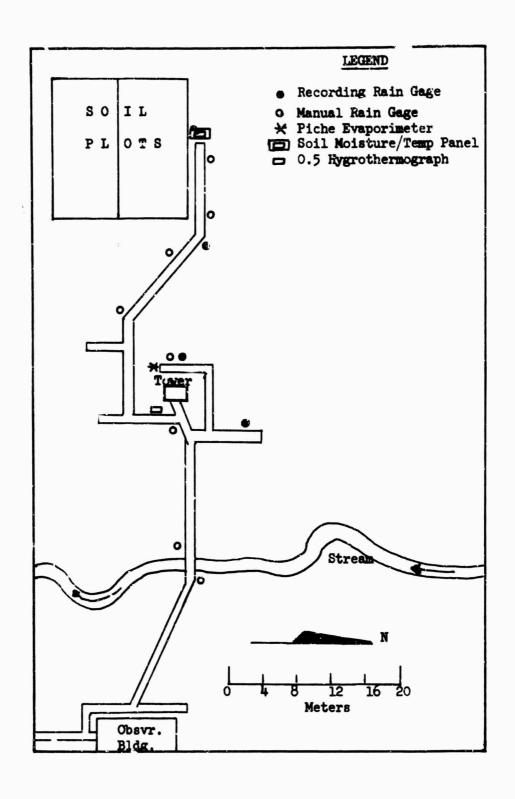


FIGURE 3. ALBROOK FOREST SITE, GENERALIZED PLOT

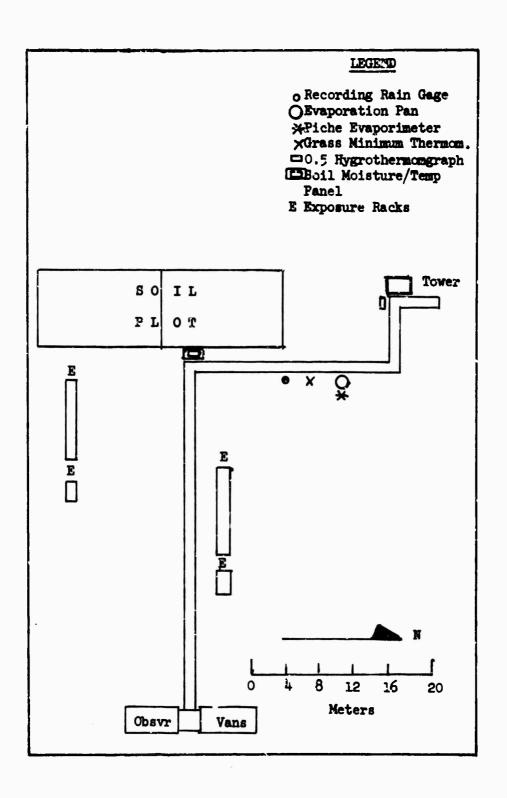


FIGURE 4. CHIVA CHIVA OPEN, GENERALIZED PLOT

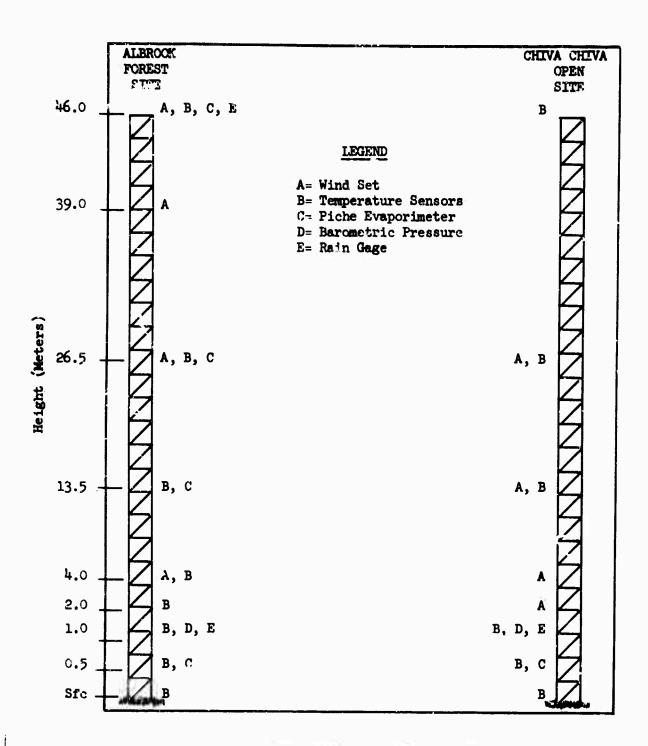


FIGURE 5. INSTRUMENT LOCATION ON TOWERS

# SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA OCTOBER 1967

| Stock level   01   02   03   05   05   06   07   08   09   10   11   12   13   14   15   15   17   18   19   20   21   22   23   24   08   09   09   10   11   12   13   14   15   15   15   15   15   15   15   |                | ×          |             |         | 3      |        |         | <del>ر</del> |        |       | -4         |
|--|----------------|------------|-------------|---------|--------|--------|---------|--------------|--------|-------|------------|
| Monthly Means of Air Temperature by Hour  Level 01 02 03 0. 05 06 07 08 09 10 11 12 13 14 15 16 17 :8 19 20 21 22 23 24 0856  46.0m 74.4 74.2 74.0 73.9 73.7 74.5 76.4 78.9 80.9 82.4 82.2 81.1 79.7 79.0 78.7 7.8 76.9 75.8 75.4 75.1 75.0 74.9 74.7 72.5 73.5 73.5 73.5 73.5 73.5 73.5 73.5 73   | ary            | n Ma       | 86.         |         | 87,    | 86.    |         | 84.          |        | 83.   | 82.        |
| Monthly Means of Air Temperature by Hour  Level 01 02 03 0. 05 06 07 08 09 10 11 12 13 14 15 16 17 :8 19 20 21 22 23 24 0856  46.0m 74.4 74.2 74.0 73.9 73.7 73.5 73.6 74.6 76.9 79.8 80.9 82.4 82.2 81.1 79.7 79.0 78.7 77.8 76.9 75.8 75.4 75.1 75.0 74.9 74.7 72.7 73.5 73.5 73.5 73.5 73.5 73.5 73.5 73  | Summs          | Mea        | 76.7        |         | 76.9   | 75.5   |         | 76.3         | 76.2   | 76.1  | 76.1       |
| Monthly Means of Air Temperature by Hour  Level 01 02 03 0. 05 06 07 08 09 10 11 12 13 14 15 16 17 :8 19 20 21 22 23 24 0856  46.0m 74.4 74.2 74.0 73.9 73.7 73.5 73.6 74.6 76.9 79.8 80.9 82.4 82.2 81.1 79.7 79.0 78.7 77.8 76.9 75.8 75.4 75.1 75.0 74.9 74.7 72.7 73.5 73.5 73.5 73.5 73.5 73.5 73.5 73  | ıthly :        | Min.       | 71.3        |         | 71.0   | 69.5   |         | 69.7         | 69.7   | 69.7  | 70.2       |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | Mor            | No of obs. | 722         |         | 744    | 742    |         | 720          | 720    | 721   | 740        |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   |                | 24         | 4.7         |         | 4.1    | 4.0    |         | £.3          | 4.     | 4.4   | 4.3        |
| 1. evel 01 02 03 0. 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.5 74.6 75.9 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 75.9 13.5 m 73.8 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 75.7 9.5 m 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 m 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 74.0 75.3  |                | 23         | 4.9 7       |         | 4.3    | 1.4    |         | 1.5 7        | .5 7   | 4.5 7 | 4.6 7      |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   |                | 22         | . 0 .       |         |        | .5 7   |         | 1.7 7.       | . 8 .  | - 8 - | . 7 7      |
| 1. evel 01   02   03   0. 05   06   07   08   16.0m   74.4   74.2   74.0   73.9   73.7   73.7   74.5   76.4   26.5 m   74.0   73.9   73.7   73.7   73.7   74.5   76.9   26.5 m   74.0   73.9   73.7   73.7   73.5   73.6   74.6   76.9   13.5 m   73.8   73.6   73.4   73.2   73.2   73.9   75.8   8.0 m   73.9   73.8   73.6   73.4   73.3   73.3   74.1   76.1   2.0 m   73.9   73.8   73.6   73.4   73.3   73.3   74.1   75.7   9.5 m   74.0   73.7   73.6   73.4   73.3   73.3   74.1   75.7   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   73.6   73.6   73.6   73.6   73.6   73.6   73.6   73.8   73.6   73.6   73.6   73.6   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74. |                | 21         | <del></del> |         | .7 7.  | .9 74  |         | .9 74        | .0     | .0 74 | .1 74      |
| 1. evel 01   02   03   0. 05   06   07   08   16.0m   74.4   74.2   74.0   73.9   73.7   73.7   74.5   76.4   26.5 m   74.0   73.9   73.7   73.7   73.7   74.5   76.9   26.5 m   74.0   73.9   73.7   73.7   73.5   73.6   74.6   76.9   13.5 m   73.8   73.6   73.4   73.2   73.2   73.9   75.8   8.0 m   73.9   73.8   73.6   73.4   73.3   73.3   74.1   76.1   2.0 m   73.9   73.8   73.6   73.4   73.3   73.3   74.1   75.7   9.5 m   74.0   73.7   73.6   73.4   73.3   73.3   74.1   75.7   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   73.6   73.6   73.6   73.6   73.6   73.6   73.6   73.8   73.6   73.6   73.6   73.6   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74.1   74.1   73.9   73.8   73.6   73.6   74.0   75.3   9.5 m   74.1   74. |                |            | 4 75        |         | .0 74  | .2 74  |         | 2 74         | 3 75   | 2 75  | 4 75       |
| 1. evel 01 02 03 0. 05 06 07 08 08 15.0m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 Ev.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 72.7 73.5 73.6 74.6 75.9 13.5 m 73.8 73.6 73.5 73.4 73.2 /3.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c 74.1 74.1 73.9 73.8 73.8 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 74.0 75.3  |                | 9          | 8 75.       |         | 4 75   | B 75.  |         | 7 75.        | 8 75.  | 7 75. | 8 75.      |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   |                | 1          | 9 75.       |         | 5 75.  | 7 75.  |         | 3 75.        | 1 75.  | 4 75. | 5 75.      |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   |                |            | 3 76.       |         | 76.    | 76.    | -       | 76.          |        | 76.   | 76.0       |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | our            | 17         | 77.8        | s time  | 78.    | 78.    | s time  | 77.4         | 77.5   | 77.4  | <u>.</u> . |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | by H           | 16         | 78.7        | at thi  | 79.3   | 79.0   | #<br>#  | 78.3         | 78.3   | 78.0  | 78.2       |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | rature         | 15         | 79.0        | rature  | 79.8   | 79.6   | ature   | 78.8         | 78.7   | 78.6  | 78.6       |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | Tempo          | 14         | 7.67.       | tempe   | 80.6   | 80.2   | emper   | 79.1         | 79.0   | 78.6  | 78.7       |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | of Aur<br>(or) | 13         | 81.1        | r air   | 82.0   | 81.3   | r air   | 79.5         | 79.3   | 79.1  | 79.5       |
| 1. evel 01 02 03 0. 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.5 74.6 75.9 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 75.9 13.5 m 73.8 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 75.7 9.5 m 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 m 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 74.0 75.3  | eans           | 12         | 82.2        | nted fo | 83.0   | 82.3   | ted fo  | 80.7         | 80.4   | 90°C  | 8-62       |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | thly M         | 11         | 32.4        | trumen  | 32.8   | 31.4   | trume   | 30.4         | 6.0    | 9.6   | 2.67       |
| Level 01 02 03 0: 05 06 07 08 08 45.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 This leve 26.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 73.5 73.6 74.6 76.9 13.5 m 73.9 73.6 73.5 73.4 73.2 73.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c. 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c. 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 73.6 73.6 74.0 75.3   | Mon            | 10         | 6.08        | ot ins  | 31.5   | 1.0    | ot ins  | 9.5          | 9.2    | 9 B   | 8.4        |
| 1. evel 01 02 03 0. 05 06 07 08 08 15.0m 74.4 74.2 74.0 73.9 73.7 73.7 74.5 76.4 Ev.5 m 74.0 73.9 73.7 73.7 73.7 74.5 76.4 13.5 m 74.0 73.9 73.7 72.7 73.5 73.6 74.6 75.9 13.5 m 73.8 73.6 73.5 73.4 73.2 /3.2 73.9 75.8 8.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 2.0 m 73.9 73.8 73.6 73.4 73.3 73.3 74.1 76.1 1.0 c 74.0 73.7 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c 74.1 74.1 73.9 73.8 73.8 73.6 73.4 73.3 73.3 74.1 75.7 9.5 c 74.1 74.1 73.9 73.8 73.6 73.6 73.6 73.6 74.0 75.3  |                | 60         | 6.8         | was n   | 5.6    | 8.3    | was n   | 8.1.7        | 7.8 7  | 7.5 7 | 7.0.7      |
| Level 01 02 03 0. 05 06 0<br>46.0 m 74.4 74.2 74.0 73.9 73.7 73.7 74.1 73.5 m 74.0 73.9 73.7 72.7 73.5 73.6 74.1 13.5 m 73.8 73.6 73.4 73.2 73.2 73.3 73.3 74.0 m 73.9 73.8 73.6 73.4 73.3 73.3 73.3 74.0 m 73.9 73.8 73.6 73.4 73.3 73.3 73.3 74.1 0.7 74.0 73.7 73.6 73.4 73.3 73.3 73.3 74.0 73.7 73.9 73.8 73.6 73.4 73.3 73.3 73.3 74.0 73.7 73.9 73.8 73.6 73.4 73.3 73.3 73.3 74.0 73.7 73.9 73.8 73.6 73.4 73.3 73.3 73.3 74.0 73.7 73.9 73.8 73.6 73.8 73.6 73.6 73.6 73.6 73.6 73.6 73.6 73.6  |                |            |             | level   |        |        | level   |              |        |       |            |
|  |                |            | 4.5 7       | This    | 4.6 7  | 3.9 7  | This    | 4.1 7        | 4.0 7  | 4.1 7 | 4.0 7      |
|  | <br>           | 1!         | 3.7 7       |         | 3.6 7  | 3.2 7  |         | 3.3.7        | 3.3 7. | 3.3 7 | 3.6 7      |
|  |                | 1          | 3.7 7.8     |         | .5 7   | 1.2 /: |         | 3,7;         | .3 7   | 3 7:  | .6 7       |
|  |                | ).         | .9 73       |         | .7 73  | 4 73   | _       | 4 73         | .4 73  | .4 73 | .8 73      |
| 0 7 1 7 7  |                | 3 (        | .0 73       |         | .7 73  | .5 73  |         | .6 73        | .6 73  | .6 73 | .9 73      |
|  |                |            | 2 74        | -       | 9 73   | 6 73.  |         | 8 73         | 8 73   | 7 73. | 1 73.      |
| 0 7 1 7 7  |                | I — II     | 4 74.       |         | 0 73.  | 8 73.  |         | 9 73.        | 9 73.  | 0 73. | 1 74.      |
| 0 7 1 7 7  |                |            | n 74.       | c       | n 74.  | n 73.  | <u></u> | 73.          | ٦3.    | 74.   | 74.        |
|  | sure           | [eve       | 46.0n       | 8.50    | 26.5 n | 13.5 m | 8.0 m   | 4.0 n        | 2.0 n  | 1.0.5 | 0.5        |
|  | Expo           | Site       |             |         | (01    | 15 15  | oro1    | cok (        | MIA    |       |            |

| 85.2   |  | 83.2  | 96.0  |  |   |  | 93.0  | 96.0   |   |
|--|--|---|---|--|---|--|---|--|---|
| 75.8   |  | 75.   | 75.7  |  |   |  | 77.2  | 77.3   |   |
| 8.69   |  | €.59  | 67.8  |  |   |  | 63.0 77.2 93.0  | 0.69   |   |
| 79.3 80.5 30.4 79.9 78.8 77.5 77.8 77.0 76.0 75.2 74.7 74.6 74.3 74.0 73.8 74.8 75.8 |  | 80.1 79.0 78.7 77.9 77.1 76.0 75.0 74.5 74.2 74.0 73.6 73.4 744 68.3 75. 85.2 | 80.0 79.0 78.6 77.9 77.1 75.2 74.9 74.3 73.9 73.6 73.3 73.0 741 67.8 75.7 196.0 |  |   |  | 725   | 84.0 81.5 81.2 80.0 78.3 76.2 75.3 74.7 74.2 73.9 73.6 73.4 732 69.0 77.3 96.0 |   |
| 73.8   |  | 73.4  | 73.0  |  |   | •  | 85.7 85.1 83.8 81.5 80.6 79.9 78.2 76.2 75.3 74.7 74.2 73.8 73.5 73.3 725 | 73.4   | _ |
| 74.0   |  | 73.6  | 73.3  |  |   |  | 73.5  | 73.6   | _ |
| 74.3   |  | 74.0  | 73.6  |  |   | -  | 73.8  | 73.9   |   |
| 74.6   |  | 74.2  | 73.9  |  |   |  | 74.2  | 74.2   | _ |
| 74.7   |  | 74.5  | 74.3  |  |   |  | 74.7  | 7.4.   | - |
| 75.2   |  | 75.0  | 74.9  |  |   |  | 75.3  | 75.3   | _ |
| 76.0   |  | 76.0  | 73.5  |  |   |  | 76.2  | 76.2   |   |
| 77.0   | time   | 77.1  | 77.1  | time   | time  | time   | 78.2  | 78.3   | - |
| 77.8   | This level was not instrumented for air temperature at this time | 6.77  | 6.77  | This level was not instrumented for air tempetature at this time | evel was not instrumented for air tempet, aure at this time | This level was not instrumented for air temperature at this time | 6.62  | 0.08   | - |
| 78.5   | bure a   | 78.7  | 78.6  | ture a   | ourre p   | ture a   | 9.08  | 81.2   |   |
| 78.8   | empera   |   | . 0.62  | mpera  | amper,  | mberg  | 31.5  | 31.5   | - |
| 6.6  | r air t  | 80.1  | 0.08  | r air t  | r air t   | r air tr   | 83.8  | 34.0   | - |
| 80.4   | ited fo  | 80.4  | 80.4  | ted fo   | ted fo  | ted fo   | 85.1  | 85.5   | - |
| 80.5   | trumen   | 80.6 80.4   | 80.4  | trumen   | trumen  | trumen   | 85.7 (  | 86.0   |   |
| 79.3   | sui ici  | 79.1  | 79.1  | ot ins   | ot ins  | ot ins   | 84.1  | 84.6   |   |
| 77.1   | was r  | 77.0  | 77.3  | Wası   | Was   | wasn   | 81.8  | 82.3   |   |
| 00   | level  | 0   | 6   | level  | l level   | i level  | 4   | _  |   |
| 73.6   | Thi  | 73.6  | 73.4  | Ę  | This le   | 본  | 75.0  | 75.2   |   |
| 73.1   |  | 72.6  | 72.3  |  |   |  | 72.5  | 72.5   |   |
| 72.9   |  | 72.6  | 72.3  |  |   |  | 72.7  | 72.6   | ۱ |
| 73.0   |  | 72.8  | 72.4  |  | _   |  | 72.7  | 72.7   | ĺ |
| 73.2   |  | 72.9  | 72.6  |  |   |  | 73,0  | 72.9   |   |
| 73.3   |  | 73.1  | 72.7  |  |   |  | 73.0  | 73.0   | - |
| 73.5   |  | 73.3  | 73.0  | _  |   | 211  | 1.0m 73.1 73.6 73.0 72.7 72.7 72.5 75.0 78.                               | 73.1   |   |
| 46.0m 73.5 73.3 73.2 73.0 72.9 73.1 <b>73.6</b> 74.                                  | 28.5 m   | 26.5m 73.3 73.1 72.9 72.8 72.6 72.6 73.6 75.                                  | 3.5m 73.0 72.7 72.6 72.4 72.3 72.3 73.4 74.                                     | 8.cm   | 4.0 m   | 2.0 m  | 1.0 m   | 0.5m 73.1 73.0 72.9 72.7 72.6 72.5 75.2 78.                                    |   |
| 4  | 2  | (9112<br>24   | นอะ   | 57   |   | evid:  | )   |  |   |
|  |  |   |   |  |   |  |   |  | J |

# SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

OCTOBER 1967

| åry*   |  |   |   |  |                                     |  |                   |              |              |             |   |
|--|--|---|---|--|-------------------------------------|--|-------------------|--------------|--------------|-------------|---|
| y Summ   | 4  |   |   |  |                                     |  |                   |              |              |             | _ |
| Monthly Summary*                               | -  |   |   |  |                                     | · <u> </u>   |                   | ,            |              |             |   |
|  | 24   | 5.0   |   | 4.1                                    | 6.3                                 |  | 4.5               | 4.9          | 5.5          | 6.1         |   |
|  | 23   | £.3   |   | 4.0                                    | 5.3                                 |  | 4.5               | 4.9          | 5.0          | 6.2         |   |
|  | 22   |   |   |  |                                     |  |                   |              | 4°C          | 5.4         |   |
|  | 21   | 5.2   | _   | 3.4 3.7                                | 4.6 4.7                             |  | 5.0 4.4           | 5.2 4.7      | 5.7          | 5.3 5.4     |   |
|  | 20   | 5.4 5.2 5.1                                   |   | 4.2                                    | 4.9                                 |  | 5.3               | 5.3          | 4.7          | 5.5         |   |
|  | 19   | ď   |   | 4.9                                    | 0.9                                 |  | 5.2               | 5.5          | 5.1          | 5.1         |   |
|  | 18   | , ;<br>æ                                      | -   | 6.7                                    | 6.9                                 |  | 5.9               | 6.1          | 6.1          | 9.9         | _ |
| ıı   | 09   10   11   12   13   14   15   16   17   18   19   20   21 | 9.4 11.6 12.7 12.2 11.2 13.3 10.5 10.4 9.6 8. | time  | 8.1                                    |                                     | time.  | 7.9               | 8.9 7.9 7.3  | 6.5          |             |   |
| by Ho  | 16   | 10.4  | at chis   | 10.3                                   | 6,0                                 | at this  | 9.0               | 7.9          | 8.0          | 8.0 7.5 8.1 |   |
| raturo   | 15   | 10.5  | ature   | 10.6                                   | 11.1                                | ature  | 9.3 13.1 10.3 9.0 | 6.8          | 7.8          |             |   |
| Телре  | 14   | 13.3  | tempe   | 12.3                                   | 10.8                                | tempe  | 10.3              | 9,3          | 8.0          | 8.6 8.2     |   |
| of Air<br>(oF)                                 | 1.3  | 11.2  | or atr  | 10.4                                   | 6                                   | or sir   | 13.1              | 9.3 10.2 9.3 | 8.5 10.0 8.0 |             |   |
| anges  | 12   | 12, 2   | ented 1   | 11.4                                   | 11.4                                | ented 1  | 9.3               | 9.3          |              | 1 7.0       | _ |
| Monthly Ranges of Air Temperaturo by Hour (oF) | =  | 12.7  | rel was not instrumented for air temperature at this time | 8.7 10.4 10.5 11.4 10.4 12.3 10.6 16.3 | 9.9 10.9 11.4 9.9 10.8 11.1 9.9 8.6 | el was not instrumented for air temperature at this time | 9.8 9.3           | 9.5 8.7      | 6.7 7.7      | 5.5 6.7 7.0 |   |
| Mo   | 10   | - 11.6  | s not to  | 10.4                                   |                                     | s not 1  | φ.<br>σ.          |              |              |             |   |
|  |  |   | vel wa  |  | 8.9                                 | vel wa   | 8 6.9             | 3 6.5        | 6.4          | 4.4         |   |
|  | 80   | 8 5.8   | This lev  | 8.8                                    | 5 4.5                               | This lev   | 5.3               | 8 5.3        | ა ა.         | 3.6         | _ |
|  | 10   | 7 3.8   | H   | 5 3.6                                  | 5 5.5                               | -  | 8. S. 6           | 1 4.8        | 3 °S.0       | 5.7 . 4.4   |   |
|  | 90   9   | 7 4.7   |   | 5.0 4.5                                | 4 7.5                               | -  | 0 5.8             | 1 6.1        | 4 6.3        |             |   |
|  | 4 05   | 4 4.7   |   | 5.0 5.                                 | .1 7.4                              |  | 5.8 6.0           | 5.8 6.1      | 6.3 6.4      | 6.5 1.      |   |
|  | 03 04  | 4.1 4.4                                       |   | 4.2 5.                                 | 6.3 7.1                             |  |                   | 5,9          | 6.1 6.       | 6.3 6.1     |   |
|  | 0   70   | 3.7 4   |   | 4.0 4                                  | 9 7.9                               |  | 5.7 6.4           | 5.9          | 5.5 6        | 9 9 9       |   |
|  | 01 0   | 3.8   |   | 4.0                                    | 6.1 6                               |  | 4.9               | 4.9          | 4.6 5        | 6.1 6       |   |
| 9  | Level  | 46.0 m  | 28.5 m  | 26.5m                                  | 13.5m                               | 8.0 m  | 4.0 m             | 2.0 m        | 1.0m         | 0.5 m (     | _ |
| Exposure                                       | Site Lev   | 46  | 28.   |  |                                     |  | k (Fc             |              |              | 0.          |   |

\* No monthly summary was computed for the ranges.

| 5.6 6.3 5.6 6.2 6.5 5.9 5.8 7.0  This leve 6.0 6.0 5.4 6.2 8.6 6.2 6.8 5.6 5.9 7.4 5.8 6.6 8.0 6.7 6.9 5.8  This leve This leve 7.0 4.7 5.8 5.6 6.8 7.0 8.5 12.0 4.7 4.5 5.5 5.2 7.0 7.0 9.2 15.2  | 5.6 6.3 5.6 6.2 6.5 5.9 5.8 7.0 8.4 9.9 10.6 10.7 10.9 11.2 11.9 10.6 9.6 7.8 6.5 6.1 5.3 5.1 4.2  This level was not instrumented for air temperature at this time 6.0 6.0 5.4 6.2 8.6 5.2 6.8 5.6 7.7 6.8 10.2 11.2 11.6 12.2 12.8 10.4 7.8 6.9 6.3 5.2 5.4 5.6 5.9 7.4 5.8 6.6 8.0 6.7 6.9 5.8 7.9 9.0 10.8 12.1 12.0 12.2 12.8 10.4 10.8 7.5 7.0 6.7 5.6 5.0 5.2  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  4.7 4.7 5.8 5.5 5.2 7.0 7.0 9.2 15.2 16.4 22.0 17.5 18.5 18.0 15.9 13.9 13.2 12.9 7.8 6.8 4.9 5.0 5.3 4.8  | 5.6 6.3 5.6 6.2 6.5 5.9 5.8 7.0 8.4 9.9 10.6 10.7 10.9 11.2 11.9 10.6 9.6 7.8 6.5 6.1 5.3 5.1 4.2  This level was not instrumented for air temperature at this time 6.0 6.0 5.4 6.2 8.0 6.7 6.9 5.8 7.7 6.8 10.2 11.2 11.6 12.2 12.8 10.4 7.8 6.9 6.3 5.2 5.4 5.6  5.9 7.4 5.8 6.6 8.0 6.7 6.9 5.8 7.9 9.0 10.8 12.1 12.0 12.2 12.8 10.4 10.8 7.5 7.0 6.7 5.6 5.0 5.2  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  4.7 4.7 5.8 5.8 6.8 7.0 8.5 12.0 14.3 18.8 16.7 15.9 14.8 15.7 12.8 13.2 12.9 7.8 6.8 4.9 5.0 5.3 4.8  | 46.0 m   | 28.5 m         | 26.5 m | 13.5m  | 8.0 m     | 4.0 m    | 2.0 m    | 1.0 m | 0.5 m  |
|--|--|---|----------|----------------|--------|--------|-----------|----------|----------|-------|--------|
| 5.8 7.0 8.4 9.9 10.6 10.7 10.9 11.2 11.9 19.6 9.6 7.8 6.5 6.1 5.3 5.1 4.2  This level was not instrumented for air temperature at this time  6.8 5.6 7.7 6.8 10.2 11.2 11.6 12.2 12.8 10.4 10.8 7.5 7.0 6.7 5.6 5.0 5.2  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  8.5 12.0 14.3 18.8 16.7 15.9 14.8 15.7 12.8 13.2 12.9 7.8 6.8 4.9 5.0 5.3 4.8  9.2 15.2 16.4 22.0 17.5 18.5 18.0 15.9 13.9 13.2 12.9 7.9 6.8 4.9 5.0 5.3 4.8  | 5.8 7.0 8.4 9.9 10.6 10.7 10.9 11.2 11.9 19.6 9.6 7.8 6.5 6.1 5.3 5.1 4.2  This level was not instrumented for air temperature at this time  6.8 5.6 7.7 6.8 10.2 11.2 11.6 12.2 12.8 10.4 10.8 7.5 7.0 6.7 5.6 5.0 5.2  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  8.5 12.0 14.3 18.8 16.7 15.9 14.8 15.7 12.8 13.2 12.9 7.8 6.8 4.9 5.0 5.3 4.8  9.2 15.2 16.4 22.0 17.5 18.5 18.6 15.9 13.9 13.2 12.9 7.9 6.8 4.9 5.0 5.3  | 5.8 7.0 8.4 9.9 10.6 10.7 10.9 11.2 11.9 19.6 9.6 7.8 6.5 6.1 5.3 5.1 4.2  This level was not instrumented for air temperature at this time  6.8 5.6 7.7 6.8 10.2 11.2 11.6 12.2 12.8 10.4 10.8 7.5 7.0 6.7 5.6 5.0 5.2  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  This level was not instrumented for air temperature at this time  8.5 12.0 14.3 18.8 16.7 15.9 14.8 15.7 12.8 13.2 12.9 7.8 6.8 4.9 5.0 5.3 4.8  9.2 15.2 16.4 22.0 17.5 18.5 18.5 18.9 13.9 13.2 12.9 7.9 6.8 4.9 5.0 5.3 4.8   | 9        |                |        |        |           |          |          |       | 4.7    |
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| 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8  |          | ted for        | 11.2 1 | 12.1   | ted for   | ited for | tod for  | 15.9  | 18.5   |
| 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8  | - 6      | r air te       | 1.6.1  | 12.0 1 | r alr ite | r air te | r air te | 4.8 1 | 8.0°   |
| 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8  |          | mpera          | 2.2    | 12.2 1 | mpera     | mpera    | mpera    | 15.7  | 5.9    |
| 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8  |          | ture at        | 12.8 1 | 12.8 1 | ture at   | ture     | Ture a   | 2.8   | 13.9 1 |
| 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8   | 7.8 6.5 6.1 5.3 5.1 4.2<br>7.8 6.9 6.3 5.2 5.4 5.6<br>7.5 7.0 6.7 5.6 5.0 5.2<br>7.9 6.8 4.9 5.0 5.3 4.8  | <u>ر</u> | this           | 0.2 1  | 0.4 1  | this t    | t this t | this t   | 3.2 1 | 3.2    |
| 7.8 6.5 6.1 5.3 5.1 4.2 5.0<br>7.8 6.9 6.3 5.2 5.4 5.6 5.0<br>7.5 7.0 6.7 5.6 5.0 5.2 5.2<br>7.8 6.8 4.9 5.0 5.3 4.8 4.1   | 7.8 6.5 6.1 5.3 5.1 4.2 5.0<br>7.8 6.9 6.3 5.2 5.4 5.6 5.0<br>7.5 7.0 6.7 5.6 5.0 5.2 5.2<br>7.8 6.8 5.1 5.0 5.3 4.8 4.7<br>7.9 6.8 4.9 5.0 5.3 4.8 4.1  | 7.8 6.5 6.1 5.3 5.1 4.2 5.0<br>7.8 6.9 6.3 5.2 5.4 5.6 5.0<br>7.5 7.0 6.7 5.6 5.0 5.2 5.2<br>7.8 6.8 5.1 5.0 5.3 4.8 4.7<br>7.9 6.8 4.9 5.0 5.3 4.8 4.1   | _ y      | ine in         |        | 9.0    | ime       | Ime      | Ime      | 6.2   | 2.9    |
| 6.5 6.1 5.3 5.1 4.2 5.0<br>6.9 6.3 5.2 5.4 5.6 5.0<br>7.0 6.7 5.6 5.0 5.2 5.2<br>6.8 5.1 5.0 5.3 4.8 4.7<br>6.8 4.9 5.0 5.3 4.8 4.1  | 6.5 6.1 5.3 5.1 4.2 5.0<br>6.9 6.3 5.2 5.4 5.6 5.0<br>7.0 6.7 5.6 5.0 5.2 5.2<br>6.8 5.1 5.0 5.3 4.8 4.7<br>6.8 4.9 5.0 5.3 4.8 4.1  | 6.5 6.1 5.3 5.1 4.2 5.0<br>6.9 6.3 5.2 5.4 5.6 5.0<br>7.0 6.7 5.6 5.0 5.2 5.2<br>6.8 5.1 5.0 5.3 4.8 4.7<br>6.8 4.9 5.0 5.3 4.8 4.1   | a        | 0              | 7.8    | 7.5    |           |          |          | 7.8   | 7.9    |
| 6.1 5.3 5.1 4.2 5.0<br>6.3 5.2 5.4 5.6 5.0<br>6.7 5.6 5.0 5.2 5.2<br>5.1 5.0 5.3 4.8 4.7   | 6.1 5.3 5.1 4.2 5.0<br>6.3 5.2 5.4 5.6 5.0<br>6.7 5.6 5.0 5.2 5.2<br>5.1 5.0 5.3 4.8 4.7   | 6.1 5.3 5.1 4.2 5.0<br>6.3 5.2 5.4 5.6 5.0<br>6.7 5.6 5.0 5.2 5.2<br>5.1 5.0 5.3 4.8 4.7  | u u      | n              | o. 9   | 7.0    |           |          |          | 6.3   | -8.9   |
| 5.3 5.1 4.2 5.0<br>5.2 5.4 5.6 5.0<br>5.6 5.0 5.2 5.2<br>5.0 5.3 4.8 4.7   | 5.3 5.1 4.2 5.0<br>5.2 5.4 5.6 5.0<br>5.6 5.0 5.2 5.2<br>5.0 5.3 4.8 4.7   | 5.3 5.1 4.2 5.0<br>5.2 5.4 5.6 5.0<br>5.6 5.0 5.2 5.2<br>5.0 5.3 4.8 4.7  | _        |                | 6.3    | 6.7    |           |          |          | 5.1   | 6.9    |
| 5.1 4.2 5.0 5.4 5.0 5.2 6 5.0 6.3 4.8 4.7  | 5.1 4.2 5.0<br>5.4 5.6 5.0<br>5.0 5.2 5.2<br>5.3 4.8 4.7   | 5.1 4.2 5.0<br>5.4 5.6 5.0<br>5.0 5.2 5.2<br>5.3 4.8 4.7  |          | ?              | 5.2    | 9.6    |           |          |          | 5.0   | 5.0    |
| 4.2 5.0<br>5.6 5.0<br>5.2 5.2<br>4.8 4.7   | 4.2<br>5.6<br>5.0<br>5.2<br>5.0<br>6.8<br>4.7  | 4.2<br>5.6<br>5.2<br>5.2<br>5.2<br>4.8<br>4.7   |          |                | 5.4    | 2.0    |           |          |          | 6.3   |        |
| 5.0  | 5.0  | 5.0   |          | 7              | 5.6    |        |           |          |          |       | - 8    |
|  |  |   |          | 0.00           | 0.0    | 5.2    |           |          |          | 1.7   |        |

## SUMMARY OF METEUROLOGICAL OBSERVATIONS HOURLY DATA

OCTUBER 1967

| Monthly Summary                                | 16   17   18   19   20   21   22   23   24   Obs. Min.   Met n | 88 91 94 94 94 94 94 56 63 90 |   | 5 95 95 95 95 95 707 64 90 | 96 96 96 96 96 96 96 |   | 97 97 97 97 698 65 95 | 97 97 97 97 698 72 95 | 96 77 699 77 96 | 97 97 97 97 741 71 96 | _ |
|--|--|-------------------------------|---|----------------------------|----------------------|---|-----------------------|-----------------------|-----------------|-----------------------|---|
| Monthly  | 17 18 19 20 21 22 23 24 NBs.                                   | 91 94 94 94 94 94 586         |   | 95 95 95 95 707            | 902 96 96 96 96      |   | 869 26 26 26          | 869 26 26 26          | 669 26 86 26    | 97 97 97 741          |   |
| Mc   | 17 18 19 20 21 22 23 24  | 91 94 94 94 94 94             |   | 95 95 95 95                | 96 96 96 96          |   | 97 97 97              | 97 97 97              | 97 98 97        | 97 97 97              | _ |
|  | 17 18 19 20 21 22 23   | 91 94 94 94 94                |   | 95 95 95 95                | 96 96 96             |   | 26 26                 | 26 26                 | 96 26           | 26 26                 |   |
|  | 17 18 19 20 21 22  | 91 94 94 94 94                |   | 95 95 95                   | 96 96                |   | 97                    | 26                    | 97              | 97                    |   |
|  | 17   18   19   20   21   | 91 94 94 94                   |   | 95 95                      | 96                   |   |                       |                       |                 |                       |   |
|  | 17   18   19   20  | 91 94 94                      |   | 93                         |                      |   | 37                    | 97                    | 23              | 2                     |   |
|  | 17   18   19   | 91 94                         |   |                            | 96                   |   |                       |                       |                 | 6                     | _ |
|  | 17 18  | 16                            |   |                            |                      |   | 97                    | 16                    | 97              | 97                    | _ |
|  | 17   |                               |   | 95                         | 96                   |   | 97                    | 96                    | 97              | 97                    | _ |
|  | <u> </u> -   | 00                            | <b>a</b> -  | 94                         | 95                   | 4   | 96                    | 97                    | 97              | 96                    |   |
| lour   | ا م  |                               | ds tin  | 06                         | 93                   | is tim  | 3.5                   | 96                    | 96              | 96                    |   |
| ry by 1  |  | 88                            | y at th   | 87                         | 92                   | y at th   | 94                    | 9.5                   | 96              | . 95                  |   |
| 1plmul   | 15   | 85                            | umidit  | 88                         | 06                   | umidit  | 92                    | 93                    | 94              | 34                    |   |
| tive }   | 14   | - 8 <b>4</b>                  | tive h  | 83                         | 83                   | tive h  | 06                    | 16                    | 93              | 94                    | _ |
| Monthly Means of Relative Humidity by Hour (%) | 13   | 8,                            | or rela   | 80                         | 87                   | or rela   | 8                     | 90                    | . 92            | 92                    |   |
| leans  | 17   | 78                            | inted f   | 7.7                        | 88                   | inted f   | 98                    | 88                    | 95              | 95                    |   |
| thly N   | 1  | 7.8                           | strume  | 7.7                        | 98                   | strume  | 88                    | 06                    | 93              | 96                    |   |
| Mon  | 10   | 82                            | his level was not instrumented for relative humidity at this time | 81                         | 88                   | was not instrumented for relative humidity at this time | 90                    | 16                    | 94              | 94                    |   |
|  | 60   | 87                            | el was  | 85                         | 9.5                  | al was  | 9.5                   | 93                    | 96              | 9                     | _ |
|  | 80   | ca<br>ch                      | ts leve   | 16                         | 94                   | his eval  | 96                    | 87                    | 97              | 96                    |   |
|  | 07   | 9.<br>4.                      | ቲ   | 9.8                        | 96                   | Ħ   | 97                    | 97                    | 97              | 96                    |   |
|  | 00   | 9.8                           |   | 96                         | 97                   |   | 98                    | 86                    | 98              | 96                    |   |
|  | 0.5  | 9.8                           |   | 96                         | 97                   |   | 9.8                   | 86                    | 86              | 9.7                   |   |
|  | 04   | 9.5                           |   | 96                         | 6                    |   | 9.6                   | 86                    | 8               | 97                    |   |
|  | 03   | \$6                           |   | 98                         | 97                   |   | 98                    | 65                    | 8.6             | 6                     |   |
|  | 02   | 9.6                           |   | 96                         | 45                   |   | æ<br>5                | 9 6                   | 86              | 26                    |   |
|  | 10   | 9.8                           |   | 96                         | 6                    |   | 97                    | 46                    | 6               | 26                    |   |
| ure  | Level  | 46.0 m                        | 2A.5 n.   | 26.5 m                     | 13.5 m               | 8.0 m   | 4.0 m                 | 2.0 m                 | 1.0 m           | 0.5 m                 |   |
| Exposure                                       | Site   | 4                             | -2  |                            |                      | oresi   | 0K (I                 | o1d∫A                 | ,               |                       | - |

| 100    |  | 100       | 100    |  |  |  |  | 100            | - |
|--------|--|-----------|--------|--|--|--|--|----------------|---|
| 91     |  | 90        | 92 10  |  |  |  |  | - <del>1</del> | _ |
|        |  |           |        |  |  |  |  |                | _ |
| 09     |  | - S       | 9      |  |  |  |  | 25             | _ |
| 699    | :  | 741       | 739    |  |  |  |  | 732            |   |
| 95     |  | 96        | 97     |  |  |  |  | 97             |   |
| 95     |  | 96        | 97     |  |  |  |  | 86             |   |
| 94     | ,  | 98        | 97     |  |  |  |  | œ<br>6         | _ |
| 94     |  | 4         | 96     |  |  |  |  | 86             | _ |
| 94     |  | 94        | 26     |  |  |  |  | 97             |   |
| 92     |  | 9.2       | 94     |  |  |  |  | 97             |   |
| 91     |  | 96        | 16     | <u>.</u>   |  |  |  | 96             |   |
| 88     | ils tim  | 83        | 88     | ils tim  | ils tim  | us tim   | is tim   | 16             | _ |
| 83     | y at th  | 82        | 98     | y at th  | y at th  | y at th  | y at th  | 88             |   |
| 98     | umidit   | 84        | 82     | umidit   | umidit   | umidit   | -<br>Hippun  | 98             |   |
| 84     | tive h   | 83        | 84     | tive h   | tive h   | el was not instrumented for relative humidity at this time | ed was not instrumented for relative humidity at this time | 93             | _ |
| 1 8    | or rela  | 96        | 8      | or rela  | or rela  | or rela  | or rela  | 80             |   |
| 80     | nted f   | 78        | 79     | nted f   | nted f   | inted f  | nted f   | 78             |   |
| 79     | strume   | 7.8       | 80     | strume   | strume   | strume   | strume   | 71             |   |
| 83     | not in   | 8.        | 83     | not in   | not in   | not in   | not in   | 79             |   |
| 8.9    | l was  | 87        | 88     | 1 was  | 1 was  | l was  | was.   | 82             |   |
| 93     | This level was not instrumented for relative humidity at this time | 93        | 94     | This level was not instrumented for relative humidity at this time | This leval was not instrumented for relative humidity at this time | This leve  | This leve  | 88             |   |
| 95     | 큠  | 98        | 96     | 귶  | Ē  | Th   | Ē  | 94             |   |
| 96     |  | 97        | 86     |  |  |  |  | 86             |   |
| 96     |  | 44        | 86     |  |  |  |  | 86             |   |
| 97     |  | Lö        | 86     |  |  |  |  | 86             |   |
| 96     |  | 46        | 9.8    |  |  |  |  | 86             |   |
| 96     |  | 97        | 36     |  |  |  |  | 86             |   |
| 96     |  | 96        | 98     |  | -  |  |  | 86             |   |
| 46.0 m | 28.5 m   | 26.5 ш    | 13.5 m | E 0.   | 4.0 m  | 2.0m   | o  | 0.5 m          |   |
|        | _7   | (9112<br> |        | O) to/   | СРГ  | evid.  |  |                | - |

# SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

| _     |  |   |  |  |   |   |  |  |          |
|-------|--|---|--|--|---|---|--|--|----------|
|       |  | -   |  | •  |   | · <u>·</u>  |  |  |          |
| 24    | 5  |   | 9  | 7  |   | œ   | œ  | 6  | 18       |
| 23    | s.   |   | 9  | 9  |   | 7   | ယ  | 60   | 19       |
| 22    | ν  |   | 6  | 10   |   | 12  | =  | 11   | 19       |
| 21    | 6  |   | 6  | 6  |   | 6   | 10   | 6  | 7        |
| 20    | 25   |   | ^  | ^  |   | =   | =  | Ξ  | 19       |
| 19    | 9  |   | œ  | 80   |   | =   | 12   | 6  | 3.4      |
| 18    | 1.2  |   | 10   | =  |   | 1   | 10   | 10   | 1.5      |
| 17    | 19   | ds tim  | 18   | 12   | ds tim  | 16  | 12   | 6  | 7        |
| 16    | 20   | y at th   | 27   | 16   | y at th   | =   | 7  | 13   | <b>.</b> |
| 15    | 23   | umidit  | 53   | 81   | umidit  | 16  | 15   | 7  | =        |
| 14    | 28   | tive 5  | 34   | 27   | tive h  | 35  | 27   | 21   | 91       |
| 13    | 30   | or rela   | 31   | 22   | pr rela   | 28  | 27   | 2.3  | 17       |
| 12    | 34   | mted f  | 32   | 23   | mted f  | 78  | 78   | 13   | 26       |
| Ξ     | . 28   | 15 trume  | 31   | 31   | as trum   | 28  | 25   | 22   | 22       |
| 10    | 78   | not ir  | 31   | 21   | not fr  | 28  | 27   | 12   | 53       |
| 60    | 27   | al was  | . 26   | 20   | a was   | 23  | 14   | 10   | 21       |
| 90    | 14   | s leve  | 17   | 20   | s leve  | 7   | 30   | <b></b>  | . 22     |
| 07    | 9  | £   | 9  | 9  | ቲ   | 7   | . 7  | •  | 22       |
| 90    | 4  |   | 9  | 4  |   | *   |  | 9  | 13       |
| 0.5   | <b>ا</b>   |   | 9  | 7  | AP 1 000  | 6   | Ф.   | <b>6</b> 0   | 21       |
| 04    | 2  |   | φ  | s  |   | S   | 4  | 4  | 22       |
| 03    | s<br>S   |   | 9  | 9  | and the second second   | 9   | S  | <b>د</b>   | 21       |
| 02    |  |   | <b>.</b>   | <b>.</b>   |   | 9   | 9  | 9  | 19       |
| 10    | 5  |   | 9  | 9  |   | ن   | <b>Q</b>   | 9  | 20       |
| Level | 46.0 m   | 28.5 m  | 26.5 m   | 13.5 m   | 8 Cm  | 4.0 m   | 2.0 m  | 1.0 m  | J, 5 m   |
|       | 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 | Level         01         02         03         04         05         06         07         08         09         10         11         12         13         14         15         16         17         18         19         20         21         22         23           46.0m         5         5         5         5         5         5         4         6         14         27         28         28         34         30         28         23         20         19         12         6         5         9         5         5 | Level         01         02         03         04         05         06         07         08         09         10         11         12         13         14         15         16         17         18         19         20         21         22         23           46.0 m         5         5         5         5         5         4         6         14         27         28         28         34         30         28         23         20         19         12         6         5         9         5         5           28.5 m         This level was not instrumented for relative Jumidity at this time | Level         01         02         03         04         05         06         07         08         09         10         11         12         13         14         15         16         17         18         19         20         21         22         23           46.0m         5         5         5         5         4         6         14         27         28         28         34         30         28         23         20         19         12         6         5         9         5         5           28.5 m         This level was not instrumented for relative humidity at this time           26.5 m         6 | Level         01         02         03         04         05         07         08         09         10         11         12         13         14         15         16         17         18         19         20         21         22         23           46.0 m         5         5         5         5         5         4         6         14         27         28         34         30         28         23         20         19         12         6         5         9         5         5           28.5 m         7         7         26         31         31         34         29         27         18         10         8         7         9         9         6           13.5 m         6         6         6         6         6         6         6         7         4         6         8         20         21         31         33         25         27         18         16         15         9         9         6         6 | Level         01         02         03         04         05         06         07         08         09         10         11         12         13         14         15         13         14         15         11         12         15         16         17         18         19         20         21         22         23           46.0 m         5         5         5         5         4         6         14         27         28         28         34         30         28         23         20         19         12         6         5         5         4         6         6         6         6         6         6         6         6         6         6         6         6         6         7         13         33         35         31         34         29         27         18         10         8         7         9         9         6           13.5 m         6         6         6         6         6         6         8         20         21         31         23         25         27         18         16         15         9         9         6 | Level         01         02         G3         04         05         07         08         09         10         11         12         13         14         15         16         17         18         19         20         21         22         23           46.0 m         5         5         5         5         5         5         6         6         6         6         14         27         28         28         23         20         19         12         6         5         9         5         5         9         5         5         5         8         20         19         12         6         7         4         7         7         7         7         7 <td>46.0m 5 5 5 5 5 5 6 6 6 14 27 28 28 34 30 28 23 19 10 11 12 11 11 11 11 11 11 11 11 11 11 11</td> <td>  1</td> | 46.0m 5 5 5 5 5 5 6 6 6 14 27 28 28 34 30 28 23 19 10 11 12 11 11 11 11 11 11 11 11 11 11 11 | 1        |

| * No monthly summary | was computed for | the ranges. |
|----------------------|------------------|-------------|
| *                    |                  |             |

| ## 10 7 10 10 14 18 21 30 32 29 20 37 21 21 23 15 10 12 11 9  This level was not instrumented for celative humidity at this time  5 7 8 11 7 13 15 20 27 26 32 32 41 31 25 22 12 12 12 11 9  9 5 6 7 8 14 17 21 27 24 30 31 40 31 24 24 14 13 13 11 8  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time   |
|---|
| This level was not instrumented for celative humidity at this time  This level was not instrumented for relative humidity at this time  11 7 13 15 20 27 26 32 32 41 31 25 22 12 12 12 11  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time   |
| This level was not instrumented for celative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  |
| This level was not instrumented for celative humidity at this time  This level was not instrumented for celative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  This level was not instrumented for relative humidity at this time  |
| 14       18       21       30       32       29       20       37       21       21       23       15       10       12       11         This lavel was not instrumented for relative humidity at this time       This level was not instrumented for relative humidity at this time       13       13       13       13       13       11 |
| 18 21 30 32 29 20 37 21 21 23 15 10 12 11 11 list lavel was not instrumented for relative humidity at this time 15 20 27 26 32 32 41 31 25 22 12 12 12 11 list lavel was not instrumented for relative humidity at this time his level was not instrumented for relative humidity at this time his level was not instrumented for relative humidity at this time his level was not instrumented for relative humidity at this time his level was not instrumented for relative humidity at this time his level was not instrumented for relative humidity at this time  |
| 15 10 12 11 12 11 14 13 13 11 11 11 11 11 11 11 11 11 11 11   |
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| 15 10 12 11 12 11 14 13 13 11   |
| 15 10 12 11 12 11 14 13 13 11 11  |
| 15 10 12 11 12 14 13 13 11 11 11 11 11 11 11 11 11 11 11  |
| 15 10 12 11 12 14 13 13 11 11 11 11 11 11 11 11 11 11 11  |
| 15 10 12 11 12 14 13 13 11 11 11 11 11 11 11 11 11 11 11  |
| 15 10 12 11 12 11 14 13 13 11 11  |
| 15 10 12 11<br>12 12 12 11<br>14 13 13 11   |
| 15 10 12 11 12 11 14 13 13 11   |
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| 2 6 6   |

# SUMMARY OF METEOROLOGICAL OBSERVATIONS

OCTOBER 1967

HOURLY DATA

| <u>ک</u>                                     | Max.  | 80.0  | 80.6  | 81.0  | .850                                    | 1.18<br>0.87<br>1.28   |
|--|---|---|---|---|---|--|
| umma   | Mean  | 75.0  | 75.1  | 75.2  | .735                                    | 9.44<br>5,36<br>5.77   |
| Menthly Summary                              | Min.  | 68.5 75.0 80.0  | 68.7  | 66.0 75.2   | .629 .735 .850                          | 0.01 5.44 1.18<br>0.01 5.36 0.87<br>0.01 5.77 1.28   |
| Mc   | No of Min. Mean Max.                            | 869   | 698 68.7 75.1 80.6  | 7411  | 741                                     | 78<br>51<br>32   |
|  | 24  |   |   | 3.7   | 759                                     | .32  |
|  | 23  | 3.9 7   | 3.9 7   | 3.9   | 992                                     | .06 0<br>.12 0<br>.26 0  |
|  | 22  | 4.0 7   | 76.4 77.1 77.5 77.5 77.6 76.8 77.2 77.0 76.4 75.6 75.0 74.6 74.3 74.1 73.9 73.7 | 4.1 7   | .685 .695 .710 .731 .752 .764 .766 .759 | 0.01 0.02 0.04 0.05 0.12 0.09 0.06 0.18 0.18 0.21 0.16 0.40 0.06 0.02 0.08 0.02 0.09 0.06 0.62 0.00 0.00 0.00 0.00 0.00 0.01 0.03 0.03 |
|  | 21  | 4.2 7   | 1.3 7   | 1.6 7   | 752                                     | 00200  |
|  | 20  | 2 2 2   | . 6 7.  |   | 31                                      | 003  |
|  | 19  | .9 74   | -0.   | -1.   | 10 -                                    | 002<br>052<br>0.0.0  |
|  |   | 4 74  | 6 75  | 8 75  | .7                                      | 0 0 0  |
|  | -   | 3 75.   | 4 75.   | 8 75.   |   | 0 6 6  |
| Hour   | 17  | 76.   | 76.   | 76.   | .68                                     | 4.00   |
| A<br>A                                       | 3.6   | 76.9  | 77.0  | 77.0  | .688 .680                               | 0.00   |
| lemen  | 15  | 77.0  | 77.2  | 77.3  | .688                                    | 0.21<br>0.16<br>0.19   |
| ther E                                       | 14  | 76.6  | 76.8  | 77.3  | .708                                    | 0.18<br>0.27<br>0.25   |
| 2 cf o                                       | 13  | 76.8  | ۲7. د   | 77.8  | .728                                    | 0.18<br>0.18<br>0.30   |
| Means  | 12  | 77.3  | 77.5  | 78.0  | .759 .728 .708                          | 0.00   |
| Monthly Means $^2$ cf other Elements by Hour | 11  | 77.3  | 77.5  | 77.7  | .784                                    | 0.00   |
| Mo   | 09   10   11   12   13   14   15   16   17   18 | 77.0  | 77.1  | 77.2  | .791  .784                              | .05 0.12<br>.03 0.07   |
|  | 60  | 76.3  | 76.4  | 76.0  | .784                                    | 0.05 0.12<br>0.03 0.07<br>0.02 0.02  |
|  | 80  | 75.2  |   | 74.6  | .769                                    | 0.04   |
|  | 02  | 73.7  | 73.6  | 73.2  | .752                                    | 0.00   |
|  | <b>9</b> 0                                      | 72.8  | 72.9  | 72.9  | .728                                    | 0.01 0.02 0.04<br>0.00 0.00 0.00<br>0.00 0.00 0.00   |
|  | 50  | 72.8  | 72.9  | 73.0  | .715                                    | 0.02   |
|  | 04 05   | 73.9  | 73.0  | 73.1  | .712                                    | 0.00   |
|  | 03  | 73.1  | 73.1  | 72  | 715                                     | 0.00   |
|  | 02  | 73.3 73.3 73.1 73.9 72.8 72.8 73.7 75.2 76.3 77.0 77.2 77.3 76.8 76.6 77.0 76.9 76.3 75.4 74.9 74.5 74.2 74.0 73.9 73.7 | 73.3 73.3 73.1 73.0 72.9 72.9 73.6 75.2   | 73.5 73.4 72 73.1 73.0 72.9 73.2 74.6 76.0 77.2 77.7 78.0 77.8 77.3 77.3 77.0 76.8 75.8 75.1 74.6 74.6 74.1 73.9 73.7 | .744 .727 .715 .712 .715 .728 .752 .769 | 0.01 0.01 0.00 0.04 0.02<br>6.00 0.00 0.00 0.01 0.01<br>0.00 0.00 0.00 0.00 0.00   |
|  | 01  | 3.3   | 3.3   | 3.5   | 744                                     | 0.01 0.01<br>6.00 0.00<br>0.00 0.00  |
|  | ļ.,   |   |   |   |   |  |
| Exposure                                     | Code  | WB<br>(4.0 m)   | W8<br>(2.0m)  | W8<br>(0,5m)  | 86                                      | T E 4  |
| tx;  | Sile  |   | (6311   | otear   | ook (i                                  | <b>M</b> bro   |

| 77.8 79.1 7.7 73.6 79.2 77.4 77.8 77.2 76.3 75.3 74.6 74.1 73.7 73.4 73.1 73.0 732 65.0 75.2 85.0 | .960  | 0.01 15.60 1.93   | <del></del>                      |
|---|---|---|----------------------------------|
| 75.2  | .840  | 15.60   |                                  |
| 65.0  | .730  | 0.0   |                                  |
| 732   | 739   | Z   |                                  |
| 73.0  | . 862   | 0.96  |                                  |
| 73.1  | .871 .870 862   | 0.17 0.05 0.03 0.38 0.15 0.25 0.14 0.24 0.50 0.09 0.14 0.06 0.02 0.06 0.21 0.96 |                                  |
| 73.4  | .871  | 0.06  |                                  |
| 73.7  | .653  | 0.02  |                                  |
| 74.1  | .838  | 0.06  |                                  |
| 74.6  | 890 .396 .886 .868 .833 .811 .793 .787 .792 .804 .818 .838 .853 | 0.14  |                                  |
| 75.3  | . 804   | 0.09  |                                  |
| 76.3  | . 792   | 0.50  |                                  |
| 77.2  | .787  | 0.24  |                                  |
| 77.8  | .793  | 0.14  |                                  |
| 77.4  | 118.  | 0.25  |                                  |
| 79.2  | . 833   | 0.15  |                                  |
| 73.6  | 898   | 0.38  | TO I WOUND SAFET OF SAFET        |
| 77  | .886  | 0.03  |                                  |
| 79.1  | . 396   | 0.02  |                                  |
| 77.8  | . 890   | 0.17  |                                  |
| 75.7  | . 873   | 0.12  | a due to paper                   |
| 73.9  | . 856   | 0.02  |                                  |
| 72.7 72.7 72.4 72.3 72.2 72.1 73.9 75.7   | .845 .827 .819 .816 .822 .837 .856 .873                         | 0.00 0.00 0.00 0.00 0.04 0.00 0.02 0.12   | was 9 ort original , and happens |
| 72.2  | .822  | 0.04  |                                  |
| 72.3  | .816  | 0.00  |                                  |
| 72.4  | . 829   | 0.00  |                                  |
| 72.7  | .827  | 0.00  |                                  |
| 72.7  | .845  | 00.00   |                                  |
| WB<br>(0.5m)  |   | PS  |                                  |

Wet buib temperature  $^{(0\Gamma)}$  Barometric pressure  $^{f_{1}}$ n. of Hg minus 29.0) W8 - -

Precipitation at 1.0 m. in open area (in.) Precipitation at 46.0 m. above canopy (in.) PS I

P3 - Precipitation under drip canopy (in.)
P4 - Pracipitation under open canopy (in.)

Precipitation totals are substituted for the mean in the "anthly summary.

 $^2$ Monthly means of precipitation are computed for precipitation days.

## SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

OCTOBER 1967

| È   |              |                                     |               |                  |  |   |   |
|---|--------------|-------------------------------------|---------------|------------------|--|---|---|
| Monthly Summary*                                      |              |                                     |               |                  |  |   |   |
| nthly (   |              |                                     |               | <u> </u>         |  |   |   |
| Mo  |              |                                     |               |                  |  |   |   |
|   | 24           | 4.0                                 | 4.0           | 8.2              | .100   | 0.00  | • |
|   | 23           | 3.6                                 | 3.9           | 8.2              | 100  | 0.00 0.00 0.00 0.00 0.00  |   |
|   | 22           | 4.0 3.6 3.6                         | 3.6           | 8.0              | .105   | 0.03  |   |
|   | 21           |                                     | 4.2           | 8.5              | .115   | 0.01  |   |
|   | 20           | 4.0                                 | 4.1           | 8.5              | .115   | 0.16  |   |
|   | 19           | 4.8                                 | 4.            | 8.4              | 060.   | 0.00  |   |
|   |              | 5.3 5.5 6.0 6.7 6.9 7.0 7.2 5.4 4.B | 5.7           | 8.5              | 001. 001. 301. 311. 311. 090. 090. 001. 011. 311. 031. 311. 311. | 0.09 0.51 0.87 0.66 0.52 1.17 0.11 0.02 0.16 0.01 0.11 0.00 0.00 0.00 0.00 0.00           |   |
| ALF   | 16   17   18 | 7.2                                 | 7.1           | 7.7              | 100  | 1.17<br>n.81<br>0.00  |   |
| Monthly Ranges <sup>2</sup> of other Elements by Hour | 16           | 7.0                                 | 7.0           | 7.5              | 110  | 0.09 0.51 0.87 0.66 0.52 1.17 0.00 0.28 0.86 0.66 0.06 0.01 0.00 0.52 1.27 0.89 0.06 0.00 |   |
| ments   |              | 6.9                                 | 6.9 0.9       | 7.0 7.5          | .115   | 0.66  |   |
| her Ele   | 14 15        | 6.7                                 | 0.9           | 8.9              | 11:0   | 0.87 0.66<br>0.86 0.66<br>1.27 0.89   |   |
| of ot   | 13           | 6.0                                 | 5.6 7.6       | 7.0 6.5 6.8      | .115   | 0.51<br>0.28<br>0.52  |   |
| anges,  | 12           | 5.5                                 | 3.5           | 7.0              | .125   | 0.00  |   |
| thly R  | =            | 5.3                                 | 5.3           | 5.2 6.6 6.2      | .115   | 0.09  |   |
| Мол   | 10           | 1.3 5.1                             | 4.7           | 9.9              | 20 - 115   | 0.00  |   |
|   | 60           | . 4.3                               | 4.4           | 6.2              | .120   | 0.02  |   |
|   | 80           | 9.4                                 | 8             | 8.9              | .135   | 0.00  |   |
|   | 07           | 4.9                                 | 4.9           | 9.0              | .120   | 0.00  |   |
|   | 90           | 6.3                                 | 6.3           | 9.9 10.0 9.3 9.0 | .120 .120 .125 .120 .125 .120 .135                               | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0  |   |
|   | 0.5          | 7.3                                 | 7.1           | 10.0             | .125   | 0.00  |   |
|   | 03 04        | 0.9                                 | 6.0           | 9.9              | 120  | 0.00  |   |
|   |              | 4.8 5.5 6.0                         | 5.0 5.5       | 9.1              | .125   | 0.00  |   |
|   | 02           | . 8                                 |               | 8.5              | .120   | 0.00  |   |
|   | 01           | 4.2                                 | 4.2           |                  | .120   | 0.00  |   |
| ure   | $code^1$     | WB<br>(4.0 m)                       | WB<br>(2.0 m) | WB<br>(0.5 m)    | 8b   | P.5   |   |
| Exposure  | Site         |                                     |               | s 12910          | 0K (E  | ordIA   |   |

\* No monthly summary was computed for the ranges.

13

| 4 10.0 8.0 12.0 11.9 9.0 8.8 9.7 7.9 6.0 5.2 3.9 4.3 4.3 4.7 4.3 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1   | 7.4 10.0 | 1. 211.     | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.12 0. |   |              |
|--|----------|-------------|--|---|--------------|
| 0 12.0 11.9 9.0 8.8 9.7 7.9 6.0 5.2 3.9 4.3 4.3 4.7 4.7 0.125 11.5 11.0 130 11.0 11.0 11.0 11.5 10.5 0.00 0.095 0.10 0.06 0.19 1.31 0.56 1.04 1.92 0.07 0.03 0.07 0.02 0.14 0.39 | 9.0      | 125 .13     | 0.0 50.0   |   |              |
| 11.9 9.0 8.8 9.7 7.9 6.0 5.2 3.9 4.3 4.3 4.7 7.15 11.5 11.5 11.5 11.5 11.5 11.5 11   | 0 12.0   | 0 .125      | ر 1.06   |   | and a second |
| 9.0 8.8 9.7 7.9 6.0 5.2 3.9 4.3 4.3 4.7 7.10 1.10 1.10 1.115 1.05 0.09 0.095 1.31 0.56 1.04 1.92 0.07 0.03 0.07 0.02 0.14 0.39   | 11.9     | .115        | 0.49   | - |              |
| 8.8 9.7 7.9 6.0 5.2 3.9 4.3 4.3 4.7 (1.0 mill) 1.0 1.1 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0   | 0.6      | .110        | 1.31 0   |   |              |
| 7 7.9 6.0 5.2 3.9 4.3 4.3 4.7 4.7 7.9 (0.100 .110 .110 .115 .105 .090 .095 7.1 1.92 0.47 0.30 0.07 0.02 0.14 0.39  | 6 8 8    | 130 : 1]    | .56 1.0  |   |              |
| 9 6.0 5.2 3.9 4.3 4.3 4.7 0.95 0.110 0.110 0.115 0.05 0.095 0.095 0.007 0.02 0.14 0.39   | 7 7.     | 01. 01      | 04 1.9   |   |              |
| 5.2 3.9 4.3 4.3 4.7 4.7 1.00 .100 .115 .105 .090 .095 0.30 0.07 0.02 0.14 0.39   | 0.9      | 011.0       | 2 0.•7   |   |              |
| 3.9 4.3 4.3 4.7 115 .115 .090 .095 0.07 0.02 0.14 0.39   | 5.2      | .100        | 0.30   |   |              |
| 4.3 4.3 4.7 105 0.095 0.02 0.14 0.39   | 9.9      | .115        | 0.07   |   |              |
| 095<br>100 095<br>14 0.33  |          | 105         | .02 0.   |   |              |
| 2 8 8  | ნ.<br>4. | 90.         | 14 0.0   |   |              |
| 105  | 7        | -5<br>-1.10 | 0.0  |   |              |

WB - Wet bulb temperature (OF)

BP - Barometric pressure (in. of H) minus 29.0)

PS - Precipitation at 1.0 m. in open area (in.)
Pl - Precipitation at 46.0 m. above canopy (in.)

P3 - Prec: pitation under drip canopy (in.)
P4 - Precipitation under open canopy (in.)

# SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

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| ă.    | Exposure |   |          |    |     |     |     |     |      |    | 2.     | lonthly  | , Mear  | ins of Wind<br>(miles/hr.) | Wind S   | Monthly Means of Wind Speed by Hour (miles/hr.)        | y Hou    |       |      |     |    |    |            |       |     | Wo    | Monthly Summary | າຕາກາລາ | ኦ         |
|-------|----------|---|----------|----|-----|-----|-----|-----|------|----|--------|----------|---------|----------------------------|----------|--|----------|-------|------|-----|----|----|------------|-------|-----|-------|-----------------|---------|-----------|
| Site  | Level    | 0 | 1 02     | 03 | 0.4 | 0.5 | 90  | 0.7 | 90   | 60 | 10     | 11       | 12      | 13                         | 13 14 15 | 15   | 16       | 17    | 81   | 19  | 20 | 21 | 22         | 23    | 24  | No of | f Min.          |         | Mean Max. |
|       | 46.0 m   | ٣ | ~7)      | Э  | m   | т   | e e | 3   | 4    | 4  | 4      | v        | 5       | 9                          | 2        | S  | 2        | 4     | - 47 | - 2 | 4  | 4  | <br>       | e<br> | (*) | 869   | 0               | 4       | 13        |
|       | 28.5 m   |   |          |    |     |     |     |     | This |    | ou sew | r inst   | านเรากา | ed for                     | wind     | level was not instrumented for wind speed at this time | at this  | time: |      |     |    |    | -          |       |     |       |                 |         |           |
| 4.    | 26.5 m   | _ |          | -  | -   | ~   | ~   |     | 2    | 2  | т      | ю        | 4       | .4                         | 3        | ٣  | m        | 2     | 2    | 2   |    | 61 | 2          | 2     | -   | 629   | <u> </u>        | 7       | 10        |
| 115 1 | 13.5 m   |   |          |    |     |     |     |     | This |    | was no | ot insti | ument   | ed for                     | wind     | level was not instrumented for wind speed at this time | at this  | K'me  |      |     |    |    |            |       | -   |       |                 |         |           |
|       | 8.0 m    |   |          |    |     | _   |     |     | This |    | was no | ot inst  | ument   | ed for                     | wind     | evel was not instrumented for wind speed at this time  | at this  | t me  |      |     |    |    |            |       |     |       |                 |         |           |
|       | 4.0 m    | 0 | <u> </u> | 0  | 0   | 0   | С   | 0   | 0    | 0  | 0      | 0        | 9       | 0                          | 0        | 0  | <b>o</b> | 0     | 0    | 0   | 0  | 0  | 0          | 0     | 0   | 552   | 0               | 0       | -         |
|       | 2.0m     |   | _        |    |     |     |     |     | This |    | was no | ot inst  | tumen.  | ed for                     | wind     | evel was not instrumented for wind speed at this time  | at this  | ttme  |      |     |    |    | · <u>-</u> |       |     |       |                 |         | _         |
|       | 1.0m     |   |          |    |     |     |     |     | This |    | was no | t insu   | ument   | o pe                       | wInd     | evel was not instrumented for wind speud at this time  | at this  | time  |      |     |    |    |            |       |     |       | ·               |         |           |
|       | 0.5 m    |   | _        |    |     |     |     |     | This |    | was no | ot inst  | ument   | ed for                     | buiw.    | evel was not instrumented for wind speed at this time  | at this  | time  |      |     |    |    |            |       |     |       |                 |         |           |
|       |          |   |          |    |     |     |     |     |      |    |        |          |         |                            |          |  |          |       |      |     |    |    |            |       |     |       |                 |         |           |

|  |  | 2 3 3 604 0 4 18 |  |  | 1 1 1 672 0 3 18 |   |  |   |     |
|--|--|------------------|--|--|------------------|---|--|---|-----|
|  |  | e<br>e           |  |  | 2                |   |  | -   |     |
|  |  | <del>د</del>     |  |  | 6)               |   |  |   | -   |
|  |  | ~                | There is a   |  | 2                |   |  |   |     |
|  | _  | <b>-</b>         |  |  | 2                |   |  |   |     |
| T.   | a e  | 9                |  | ë.   |                  |   | 9  | Ę   |     |
| his ti   | his ti   | 9                | hiş ti   | his ti   | - v              | his ti  | PI C   | PIS EL  |     |
| ed at t  | ed at t  |                  | se at t  | ed at t  |                  | ed at t   | dat t  | 3 e b   |     |
| - de pe  | d Isper  | <br>9            | d spee   | d spee   | <u> </u>         | d spec  | d tipe   | d spec  |     |
| or win   | or win   | 9                | or win   | OT WITH  |                  | or win  | or win   | io  |     |
| s level was not instrumented for wind speed at this time | s level was not instrumented for wind speed at this time | -                | s level was not instrumented for wind speed at this time | s level was not instrumented for wind speed at this time | 9                | This level was not instrumented for wind speed at this time | level was not instrumented for wind speed at this time | This level was not instrumented for wind speed at this time |     |
| strume   | strume   | 9                | strume   | strume   |                  | Strume  | attume   | Strume  |     |
| not in   | not in   |                  | not in   | not in   |                  | ndt in  | not in   | not in  | _   |
| l was  | ] was  | 'n               | l was  | l was  | 4                | Was   | 1 was  | was   | -12 |
| s leve   | s leve   | 2                | s leve   | s leve   | က                | s leve  | s leve   | s leve  | _   |
| 표  | Thi  |                  | Ē  | Ę  |                  | Ę   | This   | Th  | _   |
|  |  | -                |  |  |                  |   |  |   |     |
|  |  | 2                |  |  |                  |   |  |   |     |
| _  |  |                  |  |  |                  | _   |  |   | _   |
|  | * **   | 2                |  |  | -                |   |  |   |     |
|  |  | 2                |  |  |                  |   |  |   |     |
|  | _  | 2                |  |  | -                |   |  |   |     |
|  |  | 21               |  |  | -                |   |  |   |     |
| 46.0 m   | 28.5 m   | 26.5 ш           | 13.5 m   | 8.0 m  | 4.0 m            | 2.0.m   | 1.0m   | 0.5 m   |     |
|  |  |                  | uəd  | O) E.º   | СРП              | evid:   | )  |   |     |

11

## SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA OCTOBER 1967

| Exposure             | 02        |           | 03      |       | 04         | 00  | 90 | 07 | 80      | 60   | Mr.    | Aonthly<br>11 | Range<br>(n | y Ranges of Wind Specd: (miles/hr.) | Nand S<br>hr.) |  | y Hour<br>16   17   18 | 17     | 18 | 19 | 20 | 21 | 22             | 23  | 24    | Monthly Summary* | y Sumn | ng ry |
|----------------------|-----------|-----------|---------|-------|------------|-----|----|----|---------|--|--------|---------------|-------------|-------------------------------------|----------------|--|------------------------|--------|----|----|----|----|----------------|-----|-------|------------------|--------|-------|
| 46.0m 7 7 6 7 7 6 6  | 9         | 9         | 9 2 2   |       |            |     | 9  |    | S       | S.   | - cc   | 6             | 13          | 10                                  | 10             | 11   | 6                      | 11     | œ  |    | 2  | 8  | <u>.</u><br>Оп | .10 | · · · |                  |        |       |
| 28.5 m               | L         |           | H       | H     | [4         | -   |    | H  | This le | level was not inscamented for wind speed at this time  | s not  | inst.         | menter      | d for                               | vind s         | beed a   | t this                 | dine - |    |    |    |    | -              |     |       |                  |        |       |
| 26.5m 5 6 4 5 5 5 5  | 6 8 8 8 8 | 4 5 5 5 5 | 5 5 5 5 | 5 5 5 | s,         | S   |    |    | 5       | 7  | 2      | 2             | 10          | 6                                   | αο             | 2  | ~                      | 10     | s  | 2  | 9  | v  | 80             | ∞   | S     |                  |        |       |
| 3.5 m                | PQ.       | R.        | P.J.    | PA.   | <b>14.</b> | 4   | 렱  | 를  |         | evel was not incommented for wind speed at this time   | is not | in:           | mentex      | d for                               | vind *         | peed a   | t this                 | цие    |    |    |    |    |                |     |       |                  |        |       |
| 8.0 m                | Th        | Thi       | Th      | Th    | Th         | Th  | Th | Ţ  |         | evel was not instrumented for wind speed at this time  | is not | instru        | mentec      | d for m                             | v'nd e         | peed a   | t this                 | ime.   |    |    |    |    |                |     |       |                  |        |       |
| 4.0m 0 0 0 0 0 0 1 1 | 0 0 0     | 0 0       | 0       | 0     |            | 0 1 |    | 1  |         |  |        | 0             | -           | -                                   | 0              | 0  | 0                      | 0      | 0  | •  | 0  | 0  | D              | 0   | 0     |                  |        |       |
| 2.0 m                | Th        | T.        | TL      | TI    | Tr         | - T |    | 드  |         | evel wa  | s not  | instru        | mentex      | d for                               | vind \$        | was not instrumented for wind speed at this time | t this                 | ime    |    |    |    |    | *              |     |       |                  |        |       |
| 1.0 m                | T.        | T         | Th      | Th    | Th         | - T | T  | 부  |         | level was not instrumented for wind speed at this time | is not | instru        | mentex      | d for w                             | vind \$        | peed a   | t this !               | ıme    | •  |    | -  |    |                |     | .,    |                  |        |       |
| 0.5 m                |           |           |         | T     |            | 4   | 4  | H  |         | evel was not instrumented for wind speed at this time  | s not  | instru        | menter      | d for k                             | vind s         | beed a   | this i                 | ime    | -  |    |    |    |                |     |       |                  |        |       |
|                      |           |           |         |       |            |     | _  |    |         |  |        |               | _           |                                     |                | _  | -                      | -      | -  |    | -  |    |                | -   | ,     |                  | _      |       |

|   |   | 8        |  |   | 4<br>4   |   |   |   |
|---|---|----------|--|---|----------|---|---|---|
| Mining  |   | 7        | # 1 NO   |   | 8        |   |   |   |
| with the second                                       |   | œ        |  |   | 9        |   |   |   |
| time  | d me  | 97       | time   | time  | 15 5     | time  | time  | Ľme   |
| evel was not instrumented for wind speed at this time | evel was not instrumented for wind speed at this time | 10 18    | evel was not instrumented for wind speed at this | This level was not instrumented for wind speed at this time | 8 15     | evel was not instrumented for wind speed at this time | evel was not instrumented for wind speed at this time | evel was not instrumented for wind speed at this time |
| fer wind st   | for wind by   | 13 11    | for wind st                                      | for wind sy   | 11 11    | for wind si   | for wind sr   | for wind sy   |
| trumented   | trumented   | 8        | trumented  | trumented   | 9 . 10 1 | trumented   | trumented   | trumented   |
| as not ins  | as not ins  | 2 9      | as not ins                                       | as not ins  | 6        | as not ins  | as not ins  | as not ins  |
| This level w  | This level w  | 6 18     | This level w                                     | nis level w   | 81 9     | This level w  | This level w  | This level w  |
| _<br>_<br>F   | 4   | œ        | Ħ  | Ţ   | ٠        | Ħ   | Ħ   | Ħ   |
| -   |   | 9        |  |   | 1-       |   |   |   |
| -   |   | 4        |  |   | 3        |   |   | _   |
|   |   | <b>9</b> |  |   | 4        |   |   |   |
|   |   | 9        |  |   | S        |   |   | -   |

ALBROOK (Forest site) OCTOBER 1967

|           |       |      |                |      |                |           | Rel  | ative I   | Relative Frequencies* of Wind Directions by Hour at 46.0 m. | cies* | of Wi          | la Dir | ection         | 5 P  | our at | 46.0      | Ē     |      |       |       |                |      |           |           |
|-----------|-------|------|----------------|------|----------------|-----------|------|-----------|---|-------|----------------|--------|----------------|------|--------|-----------|-------|------|-------|-------|----------------|------|-----------|-----------|
|           |       |      |                |      |                |           |      |           |   |       |                | (%)    |                | •    |        | '         | ,     |      | :     |       |                |      |           |           |
| Dir.      | 10    | 03   | 03             | ጀ    | 0\$            | 8         | 07   | 80        | 8   | 10    | 11             | 12     | 13             | 14   | 15     | 91        | 17    | 18   | 19    | 20    | 21             | 22   | 23        | 24        |
| z         | 11.1  |      | 11.1           |      |                |           |      | _         | 10.01   |       | 9.1            |        | 9.1            |      |        |           |       |      | 10,0  |       | 22.2           | 14,3 |           |           |
| NNE       |       | 11.1 |                |      |                | 22.2      | 11.1 | 30.0      |   |       |                |        | 9.1            |      | 22.2   |           |       | 10.0 |       | 11.1  |                |      |           |           |
| N.E       | 11.1  |      |                | ,    | 11.1           | 11.1      |      |           |   |       | 9.1            | 9.1    | 9,1            | 9.1  |        |           |       |      |       |       | 11.1           |      |           |           |
| ENE       |       |      |                |      |                |           | 11.1 | 10.0 10.0 | 10.0  |       |                |        |                |      |        | 11.1      |       |      | 10.0  | 11.11 |                | 14,3 |           |           |
| Ξ         |       |      |                | 11.1 |                | 11.1 11.1 | 11.1 | 10.0 10.0 | 10.0  |       | 9.1            |        |                |      |        |           |       |      |       |       | 11.1           |      | 12.5      |           |
| ESE       |       |      |                |      |                |           |      | 10.0      |   |       |                |        | 9.1            | 9.1  | 11.11  |           |       |      |       |       |                |      |           |           |
| SE        |       |      |                |      |                |           |      |           |   | 10.01 | 9.1            | 9.1    |                |      |        | 11.11     |       |      |       |       |                |      |           |           |
| SSE       |       |      |                |      |                |           |      |           |   | 10.0  | 9.1            |        |                |      |        |           | 20.0  | 10.0 |       |       |                |      | 12,5      |           |
| S         |       |      |                |      |                |           |      | 10.0      | 20.0  | 20.0  | 18.2           | 36.4   | 27.3           | 27.3 | 22.2   | 11.1      | 20.0  | 10.0 | 10.0  |       |                |      |           |           |
| SSW       |       |      | 22.2           |      |                |           |      |           |   | 30.0  | 9.1            |        |                | 9.1  |        | 23.2      |       |      | 10.01 |       | 11.11          | 14,3 |           | 12,5      |
| ΔS        | 11.1  |      | 11.1 11.1      | 22.2 | 11.1 11.1      | 11.1      |      |           | 20.02   | 20.0  | 20.0 18.2 18.2 | 18.2   | 9,1            | 9,1  | 33,3   | 11.11     | 40.0  | 40.0 | 10,0  | 11.11 | 111            | 14.3 | 37,5      | 37,5      |
| wsw       | 111.1 | 11.1 |                | 22.2 |                | 33.3 11.1 | 11.1 |           | 10.0  | 10.0  | 9,1            |        | 18,2 18,2 11,1 | 18,2 | 11,1   | 11.1 10.0 | 10.01 |      | 20.0  | 11.1  | 11.1 11.1 28.6 | 28.6 |           | 25.0      |
| A         | 11.1  | 44.4 | 33.3           | 11.1 | 11.1           | 11.1      | 11.1 |           | 10.0  | 10.0  | 9.1            |        | 18.2           | 18.2 | 11.1   | 11.1      | 10.0  |      | 20.0  | 11.1  | 11.1           | 14,3 |           | ۱.        |
| WNW       | 11.1  |      |                | 11.1 |                |           | 22.2 |           |   |       |                | 9.1    |                |      |        | 11.11     |       |      |       | 11.1  |                |      |           |           |
| NW        |       | 11.1 |                |      |                |           |      | 10.0      |   |       |                |        |                |      |        |           |       |      | 10.0  | 11.1  |                |      |           |           |
| NNW       |       |      |                |      |                |           | 11,1 |           | 10,0  |       |                | 9,1    |                | 9.1  |        |           |       | 10.0 |       |       |                |      |           |           |
| CALM 33.3 | 33.3  | _    | 11.1 22.2 22.2 | 22.2 | 22.2 22.2 11.1 | 22.2      | 11.1 |           |   |       |                |        |                |      |        |           |       | 20.0 |       | 22.2  | 11.11          |      | 37.5 25.0 | 25.0      |
|           | ¢     |      |                | 7    |                |           |      |           |   |       |                |        |                |      |        |           |       |      |       |       |                | Ī    | 4         | L A 48011 |

Note: Due to rounding, percentage rotals do not equal 100%.
 This data represents only the first eleven days of the month.
 The instrument was removed as of 11 October, 1400 hours.

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ALBROOK (Forest site) OCTOBEP 1967

|       |      |      |      |      |      |      | "    | Relative Fremiencies* of Wind Directions by Hour at 39 0 m | Freque | enches | * of & | ind D | rection | 2    | Hours       | 000  | ١    |      | Ì    |      |      |      |               |       |
|-------|------|------|------|------|------|------|------|--|--------|--------|--------|-------|---------|------|-------------|------|------|------|------|------|------|------|---------------|-------|
|       |      |      |      |      |      |      |      |  |        |        | ;<br>; | (%)   |         |      |             |      | •    |      |      |      |      |      |               |       |
| Die H | 10   | 03   | 03   | 94   | 0\$  | 8    | 07   | 80   | 8      | 10     | 11     | 12    | 13      | 14   | 15          | 16   | 17   | 18   | 19   | 82   | 21   | 22   | 23            | 24    |
| z     |      |      |      |      |      | 10.0 | 5.0  | Q  | 5.0    | 10.5   | ÷      |       |         | 10.0 | 4.8         | 9.5  |      | 4.8  |      | 4.8  |      |      | 4.8           | 4.8   |
| NNE   |      |      |      | 10.0 |      |      |      | 5.0  |        | 5.3    |        |       | 5.3     | 5.0  |             |      |      | 4.8  |      |      | 9.5  |      | 9.5           | 9,5   |
| NE    |      | 5.0  | 5.0  | 5.0  |      | 10.0 | _    |  |        |        |        |       |         | 5.0  |             |      |      |      |      | 4.8  |      |      | 4.8           | 4.8   |
| ENE   |      |      |      |      | 5.0  | 10.0 | 10.0 | 0  | 5.0    |        |        |       |         |      | 4.8         |      | 4.8  |      |      | 4.8  |      |      |               |       |
| ш     |      |      |      |      | 5.0  | 5.0  | 5.0  | G 5.0  | 5.0    |        |        |       | 5.3     | 5.0  | 4.8         |      |      |      |      | 4.8  |      | 9.5  |               |       |
| ESE   |      |      |      |      |      |      |      | 5.0  | 5.0    |        | 5.3    |       | 5,3     |      |             |      | 4.8  |      |      |      |      |      | 4.8           |       |
| SE    |      |      |      |      |      |      |      | 5.0  | 5.0    | 5.3    |        | 5.3   |         |      |             |      | 4.8  |      |      |      |      | 4.8  |               |       |
| SSE   |      |      |      |      |      |      |      |  |        |        | 5.3    | 5.3   | 5,3     |      |             |      |      |      |      |      |      |      |               |       |
| S     | 10.0 |      |      | 5.0  |      |      |      |  | 5.0    | 36.8   | 42.0   | 52.5  | 42.0    | 30.0 | 38.1        | 28.6 | 23.8 | 9.5  | 9.5  |      |      |      | 4.8           | 9.5   |
| SSW   | 25.0 | 5.0  | 5.0  | 10.0 | 15.0 |      | 5.0  | 0 5.0  | 10.0   | 10.5   | 21.0   | 10.5  | 5.3     | 10.0 | 4.8         | 9.5  | 19.0 | 33.3 | 14.3 | 14,3 | 19.0 | 9,5  | 9.5           |       |
| SW    | 20.0 | 25.0 | 40.0 | 20.0 | 20.0 | 10.0 | 15.0 | 0 30.0   | 15.0   | 5.3    | 15.8   | 10.5  | 10.5    | 15.0 | 14.3        | 23.8 | 19.0 | 19.0 | 13,0 | 19.0 | 14,3 | 28.6 | 28.6          | 19.0  |
| WSW   | 20.0 | 10.0 | 15.0 | 15.0 | 30.0 | 20.0 | 20.0 | 0 20.0   | 20.0   | 10.5   | 10.5   | 5.3   |         | 5.0  |             | 4.8  | 14,3 | 14.3 | 14.3 | 14.3 | 19.0 | 9.5  | 9.5           | 28.6  |
| A     | 10.0 | 15.0 | 15.0 | 20.0 | 10.0 | 25.0 | 20.0 | 0 20.0   | 5.0    |        |        | 10.5  | 10.5    | 10.0 | 4.8         | 9,5  |      | 9.5  | 33.3 | 19.0 | 19.0 | 9.5  | 19.0          | 9,5   |
| MNM   |      | 10.0 | 15.0 | 5.0  | 5,0  | 10.0 | 5.0  | 0  | 10,0   | 5,3    |        |       |         |      | <b>4</b> .8 | 4.8  | 4.8  |      |      | 4.8  | 4.8  | 4.8  |               |       |
| BZ    | 5.0  | 20.0 |      | 5.0  | 10.0 |      | 5.0  |  | 5.0    | 5.3    |        |       | 10.5    |      | 19.0        | 4.8  | 4.8  |      | 4.8  | 9.5  | 14.3 | 9.5  |               |       |
| NNW   |      | 10.0 |      |      |      |      | 10.0 | 0 5.0  | 5.0    | 5.3    |        |       |         | 5.0  |             | 4.8  |      |      | 4.8  |      |      | 14.3 | 4.8           | 14.3  |
| CALM  | 10.0 |      | 5.0  | 5.0  |      |      | -    |  |        |        |        |       |         | 4.8  |             |      |      |      |      |      | _    |      |               |       |
|       | 2    |      |      |      | -    |      | :    |  |        |        |        |       |         |      |             |      |      |      |      |      |      | į    | 20 E. A. 2007 | 98484 |

• Note: Due to rounding, percentage totals do not equal 100%.
This data represents only the last 20 days of the month.
The instrument was installed as of 11 October, 1500 hours.

ALBROOK (Forest site) OCTOBER 1967

|      |      |                     |      |      |           | :     | Rel    | ative I | reque | ncies* | of Wi | nd Dir              | Relative Frequencies* of Wind Directions by Hour at 26.5 m. ( $_{\star}$ ) | s by H | our at | 26.5  | ė    |      |           |                          |      |                |               |      |
|------|------|---------------------|------|------|-----------|-------|--------|---------|-------|--------|-------|---------------------|--|--------|--------|-------|------|------|-----------|--------------------------|------|----------------|---------------|------|
|      |      |                     |      |      |           |       |        |         |       |        |       |                     |  |        |        | -     | -    |      |           |                          |      |                |               | T    |
| Dir  | 10   | 02                  | 03   | 1:0  | 05        | 90    | 07     | 80      | 60    | 10     | Ξ     | 12                  | 13   | 14     | 15     | 16    | 17   | 18   | 19        | 20                       | 21   | 22             | 23            | 24   |
| z    | 12.0 | 20.0                | 16.0 | 12.0 | 4.0       | 1.2.0 | 4.0    | 3.8     | 3.8   | 4.1    |       |                     | 8.0  | 7.7    | 16.0   | 20.02 | 3.8  | 19.2 | 23.1      | 4.0                      | 12.0 | 4.5            | 4.1           | 8.3  |
| NNE  |      |                     | 4.0  |      |           |       | 8.0    | -       | 7.7   | 4.1    |       | 4.0                 |  | 7.7    | 4.0    | 4.0   | 3.8  | 3.8  |           | 8.0                      | 8.0  |                |               | 4.1  |
| NE   |      |                     |      |      | 4.0       |       |        | 7.7     | 3.8   |        |       | _                   | 8.0  | 7.7    | 4.0    | 4.0   | 3.8  | -    |           | 4.0                      |      | 4.5            | 8,3           |      |
| ENE  |      | 4.0                 |      |      |           | 4.0   |        |         |       |        |       |                     |  |        |        |       |      | 7.7  |           | 4.0                      |      |                |               |      |
| ម    |      |                     | 8.0  | 4.0  |           | 8.0   | 4.0    |         |       |        |       |                     | 4.0  |        | 4.0    | 4.0   | 7.7  |      |           |                          |      |                |               |      |
| ESE  |      |                     |      |      |           |       |        | 7.7     | 15.4  |        |       |                     | 8.0  |        |        |       | -    | 3.8  |           |                          | 4.0  | 4.5            |               |      |
| SE   | 4.0  |                     |      |      |           |       | 7.7    | 3.8     |       |        | 12.0  | 4.0                 | 4.0  | 3.8    | 8.0    |       | 3.8  |      |           |                          |      |                |               |      |
| SSE  |      |                     |      |      |           |       |        |         | 7.7   | 4.1    | 4.0   | 8.0                 | 4.0  | 3.8    |        | 4,0   |      | 3,8  |           |                          |      |                |               |      |
| S    | 4.0  | 4.0                 |      |      | 4.0       |       |        |         |       | 12.4   | 24.0  | 44.0                | 32.0   | 30.8   | 20.01  | 24.0  | 7.7  |      | 3.8       | 4.0                      |      |                | 4.1           | 4.1  |
| SSW  |      |                     |      | 4.0  |           |       |        |         | 3.8   | 4.1    |       | 4.0                 | 8.0  |        |        |       | 11.5 |      | 3.8       |                          |      |                |               |      |
| SW   |      |                     |      |      |           |       | 8.0    | 3.8     |       | 4.1    | 12.0  |                     | 4.0  | 3.8    | 4.0    | 4.0   | 3.8  |      |           |                          | 4.0  |                |               |      |
| wsw  |      |                     |      |      |           |       |        |         |       | 8.3    | 8.0   |                     |  | 3.8    | 8.0    | 8.0   | 7.7  | 7.7  |           | 4.0                      | 4.0  | 4.5            |               |      |
| A    | 4.0  |                     | 4.0  | 4.0  |           |       |        | 7.7     | 3.8   | 16.6   |       | 4°.                 |  | 11.5   | 4.0    | 4.0   | 7.7  | 7.7  |           | 4.0                      |      | 4.5            | 4.1           |      |
| WNW  | 8.0  |                     | 8.0  | 4.0  |           | 4.0   | 8.0    | 7.7     | 15.4  | 8.3    | 12.0  | 8,0                 |  |        |        |       | -    | 11,5 |           | 8.0                      | 4.0  |                | 8.3           |      |
| MA   | 8.0  | 8.0                 |      | 8.0  | 12.0      | _     | 16.0   | 19.2    | 15.4  | 8.3    |       | 4.0                 |  | 7.7    | 12.0   | 8.0   | 23.1 |      | 34.6      | 8.0                      | 24.0 | 24.0 22.7 16.6 |               | 12.4 |
| BZZ  | 4.0  | 4.0 16.0 12.0       |      | 16.0 | 24.0 20.0 | 20.0  | 12.0   | 11.5    | 3.8   | 12.4   | 12.0  | 12.4 12.0 12.0 16.0 | 16.0   | 7,7    | 8.0    | 8.0   | 7.7  | 11,5 | 7.7       | 20.0                     | 8.0  | 8.0 13.6       |               | 12.4 |
| CALM | 56.1 | 56.1 48.0 48.0 48.0 | 48.0 | 48.0 | 51.9 51.9 |       | 40.0 2 | 3.1     | 15.4  | 12.4   | 16,0  | 8.0                 | 4.0  | 3.8    | 8.0    | 8.0   | 7.7  | 23.1 | 23.1 26.9 | 32.0 32.0 40.8 49.9 58 1 | 32.0 | 40.8           | 49.9          | 58.1 |
|      |      |                     |      |      | 1-1-1     |       | 1 .00  |         |       |        |       |                     |  |        |        |       |      |      |           |                          |      | 1              | DOM S. A 4688 |      |

• Note: Due to counding, percentage totals do not equal 100%. This data represents only the first 27 days of the month. The instrument was removed as of 27 October, 1200 hours.

ALBROOK (Forest site) OCTCBER 1967

| 1   | 4                                      |                                    |                              |                         |               |               |       |                  | Relat | ive Fi | edner | cies   | of W | ind Di | Relative Frequencies* of Wind Directions by Hour at 4.0 m. | ns by | Hour a | 1.4.0 | Ė    |          |     |       |          |     |          |     |
|---|--|------------------------------------|------------------------------|-------------------------|---------------|---------------|-------|------------------|-------|--------|-------|--------|------|--------|--|-------|--------|-------|------|----------|-----|-------|----------|-----|----------|-----|
| 4.1 4.0 4.0 3.8 7.7 4.0 8.3 24 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.   |  |                                    |                              |                         |               | -             | -     | -                | -     |        | -     | -      | ┝    |        |  |       |        |       |      |          |     | -     | $\vdash$ | -   |          |     |
| 4.1       4.0       4.0       4.0       4.0       4.0       4.0       4.1       4 | 01 02 03 04 05 06 07 08                | 03 04 05 06 07 08                  | 0.4 05 06 07 08              | 05 06 07 08             | 05 06 07 08   | 06 07 08      | 07 08 | 80               | _     |        | 8     | 2      | =    | 2      | 2  | Ξ     | =      | 92    | =    | <u>s</u> | 61  | 20    | +        | 2   | <u>~</u> | 7   |
| 4.1       4.0       4.0       3.8       7.7       4.0       4.1       4.1       4.0       4.1       4.0       4.1       4.0       4.1       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.1       4 | 4.0                                    |                                    |                              |                         | 7.7           | 7.7           | 7.7   | 7.7              | .7    | - 1    |       |        |      | į      |  | 4.0   |        | 4.0   |      | 1        |     |       |          | 3.3 |          |     |
| 4.0       4.0       3.8       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.0       4.1       4 | 8.0                                    | 8.0                                | 0.8                          | 8.0                     | 6.0           | 0.            |       |                  |       |        |       | 4.1    |      | -      |  |       | 4.0    | 4.0   |      | 3.8      | 7.7 |       | 0.4      |     | 4.1      | 4.1 |
| 4.0       4.0       3.8       4.0       8.0       3.8       4.0       8.0       8.0       8.0       8.0       8.0       8.0       8.3       8.3       8.0       8.3       4.0       8.3       4.0       8.3       4.0       8.3       4.0       8.3       4.0       8.3       4.0       4 | 4.0                                    |                                    | 3.8                          | 3.8                     | 3.8           | 3.8           | æ.e   | 3.8              | သာ    |        |       |        |      |        | 4.0  |       |        | 4.0   |      | 3.8      |     |       | 0        |     | _        | İ   |
| 4.1       6.0       4.0       3.8       4.0       8.0       3.8       4.0       8.3       4.0         4.1       8.0       3.8       4.0       4.0       8.3       4.1         4.1       4.0       4.0       4.0       4.1       4                 | 4.0 8.0                                |                                    |                              |                         |               |               |       |                  |       |        |       |        |      |        |  |       |        |       | 11.5 |          | 7.7 |       |          |     |          |     |
| 4.1       6.0       4.0       3.8       4.0       4.0       8.3       4.0       8.3       4.0       8.3       4.0       8.3       4.1       8.3       4.1       8.3       4.1       8.3       4.1       4 | 4.0 4.0 4.0                            | 4.0                                | 4.0                          | 4.0                     | 4.0           |               | 0.1   |                  |       |        | 3.8   |        |      |        | 4.0  |       |        |       |      | 3.8      |     |       |          | 1   |          |     |
| 4.1     8.0     3.8     4.0     4.0     4.0     8.3     4.0       4.1     3.8     4.0     4.0     4.1     4.1     4.1     4.1     4.1       4.1     4.0     4.0     3.8     8.0     4.1     4.1     4.1       4.0     4.0     3.6     8.0     4.1     4.1     4.1       4.0     4.0     3.6     8.0     4.1     4.1     4.1       83.0     100.0     88.0     92.0     80.0     76.9     73.1     80.0     78.9     74.7     74.7   | 1.0 4.0                                |                                    |                              |                         |               |               |       | 4.0              |       |        | 3.8   | 4.1    |      | 0.     |  |       | 4.0    |       |      |          |     |       |          |     |          |     |
| 4.1       3.8       8.3       4.1         4.1       4.0       3.8       4.0       4.1         4.0       4.0       4.0       4.0       4.1       4.1         4.0       4.0       4.0       3.8       8.0       4.1       4.1         83.0       100.0       84.0       88.0       92.0       80.0       76.0       76.9       73.1       80.0       78.9       74.7       74.7   | 4.0                                    |                                    |                              |                         |               |               |       |                  |       |        |       | 4.1    |      | 6.0    |  |       | 8.0    |       |      | 3.8      |     |       | 1.0      |     |          |     |
| 4.1       3.8       4.0       4.1       4 |  |                                    |                              |                         |               |               |       |                  |       |        |       |        |      |        | 0.4  |       |        |       |      |          |     |       |          |     |          |     |
| 4.1       4.9       3.8       4.0       4.1         4.0       4.0       4.0       4.0       4.1       4.1         4.0       4.0       3.8       8.0       4.1       4.1         83.0       100.0       84.0       88.0       76.0       76.9       73.1       80.0       78.9       74.7       74.7   | 4.0 4.0 6.0                            | 4.0                                | 0.0                          |                         |               |               |       |                  |       |        |       |        |      |        |  |       |        |       | 3.8  |          |     |       |          |     | 8.3      | 4.1 |
| 4.1     4.0     3.8     4.1     4.1       4.0     4.0     3.6     8.0     4.1     4.1       4.0     4.0     3.6     8.0     4.1     4.1       4.0     4.0     3.8     3.8     4.1     4.1       83.0     3.8     3.6     4.0     4.1     8.3       83.0     100.0     84.0     88.0     92.0     80.0     76.0     76.9     73.1     80.0     78.9     74.7     74.7  | 4.0                                    | 4.0                                | 4.0                          | 4.0                     | ) (           |               |       |                  |       |        |       |        |      |        |  |       |        |       |      |          |     |       |          |     |          |     |
| 4.0     4.0     4.0     4.0       4.0     4.0     3.8     8.0     4.1     4.1       83.0     100.0     84.0     88.0     92.0     80.0     76.9     73.1     80.0     78.9     74.7     74.7  | 4.0                                    | 4.0                                | 4.0                          | 4.0                     | 4.0           | 4.0           | 1.0   |                  |       |        |       | 4.1    |      |        |  |       |        | 4.0   |      | 3.8      |     |       | 1.0      |     | 4.1      |     |
| 4.0     4.0     3.8     8.0     4.1     4.       4.0     4.0     3.8     3.8     4.1     4.       83.0     100.0     84.0     88.0     92.0     80.0     76.0     76.9     73.1     80.0     78.9     74.7     74.  |  |                                    |                              |                         |               |               |       |                  |       | - 1    | 3.8   |        |      |        |  |       |        |       |      |          |     |       |          | 1.1 |          |     |
| 4.0     4.0     3.8     8.0     4.1     4.1       4.0     3.8     3.8     3.6     4.0     4.1     8.3       83.0     100.0     84.0     88.0     92.0     80.0     76.0     76.9     73.1     80.0     80.0     78.9     74.7     74.7  | 4.0                                    | 4.0                                | 4.0                          | 4.0                     | 4.0           | 0             |       |                  |       | -      |       | -      | 1    |        |  |       |        | 4.0   |      |          | 1   | 4.0   |          |     |          |     |
| 83.0   100.0   84.0   88.0   92.0   80.0   76.0   76.9   73.1   80.8   80.0   78.9   74.7   74.   | 4.0 4.0                                |                                    |                              |                         |               |               |       |                  |       | 1      |       |        |      | 4.0    |  | 4.0   |        | 4.0   |      | 3.8      |     | 8. ე  | -        |     |          | 4.1 |
|   | 4.0                                    |                                    |                              | 4.0                     | 4.0           | 4.0           | 0.    | لــــ<br>ار<br>ا |       | - 1    | 3.8   | -<br>  |      |        |  |       | 4.0    |       | 3.8  | 3.8      |     |       |          | _   |          | İ   |
| 83.0 100.0 84.0 88.0 92.0 80.0 76.0 76.9 73.1 80.8 80.0 80.0 78.9 74.7 74.  | 4.0 4.0                                | 4.0                                |                              |                         | 8             | 8             | 8     | 9.:              | -     |        | -     |        |      |        |  |       |        |       | 3.8  |          | 3.6 | 4.0   |          |     | 8.3 11   | 2.4 |
|   | 84.0 80.0 84.0 84.0 84.0 84.0 88.0 5.6 | 80.0 84.0 84.0 84.0 84.0 88.0 05.6 | 84.0 84.0 84.0 84.0 88.0 5.6 | 84.0 84.0 84.0 88.0 5.6 | 84.0 88.0 5.6 | 84.0 88.0 5.6 | 0.00  | 0.00             |       | 8      |       | 13.0 1 | 0.00 |        | 88.0   | 92.0  | 80.0   | 76.0  |      | 1        | _   | 80.08 |          |     | 7        | 4.7 |

• Note: Due to rounding, percentage totals do not equal  $100\sigma_C$ . This data represents only the first 27 days of the month. The instrument was removed as of 27 October, 1200 hours.

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|       |      |           |      |        |           | 1    | Rel  | ative ! | redue | ucies* | of W | nd Dir | Relative Frequencies* of Wind Directions by Hour at 26.5 m. | s by E | lour at | 26.5 | ٠    |      |      |                        |      |      |           | Γ    |
|-------|------|-----------|------|--------|-----------|------|------|---------|-------|--------|------|--------|---|--------|---------|------|------|------|------|------------------------|------|------|-----------|------|
|       |      |           |      |        |           |      |      |         |       |        |      | (%)    |   |        |         |      |      |      |      |                        |      |      |           |      |
| Ή     | 10   | 02        | 03   | 0.4    | 03        | 90   | 07   | 80      | 60    | 10     | 11   | 12     | 13  | 14     | 13      | 16   | 17   | 18   | 19   | 20                     | 12   | 22   | 23        | 24   |
| z     | 4.0  |           | 7.9  | 4.0    | 12.0      | 12,0 | 7.9  | 7.9     | 24.1  | 4.0    | ۰.6  |        | 4.0   | 4.0    | 12.0    | 16.7 | 12.0 | 7.9  | 12.0 |                        | 4.0  | 12.0 | 7.9       | 7.9  |
| NNE   | 4.0  | 7.9       |      |        | 0.        | 4.0  |      | 4.0     | 7.9   |        |      |        | 4.0   | 4.0    | 4.0     |      |      |      | 7.9  | 4.0                    |      | 4.0  | 7.9       |      |
| ZE    |      |           | 4.0  |        |           | 4.0  | 4.0  | 7.9     | _     |        | `    | 4.5    | 4.0   | 4.0    |         |      |      |      |      | 4.0                    |      | 7.9  |           |      |
| ENE   |      |           | 4.0  |        |           |      |      |         |       |        | 9.8  | 4.5    |   | 4.0    | 4.0     |      |      |      |      |                        | 4.0  |      |           |      |
| Ε     |      |           |      | 4.0    |           | 4.0  |      | 4.0     |       | 4.0    |      | 4.5    | 7.9   | 4.)    |         |      |      |      |      | 4.0                    | 7.9  | 4.0  | 4.0       |      |
| ESE   |      |           |      |        |           |      |      |         |       | 7.9    | 13.1 |        | 4.0   | 4.0    | 4.0     | 4,1  |      |      |      | 4.0                    |      |      |           |      |
| SE    |      |           |      |        |           |      |      |         | 4.0   | 7.9    |      | s. 1   | 4.0   |        | 4.0     | 4.1  | 7.9  |      |      |                        |      |      |           |      |
| SSE   |      | 4.0       | ٥.   |        |           |      |      |         | 4.0   |        |      |        | 0   |        | 12.0    | 12.5 | 4.0  | 0.   | 4.0  | 4.0                    |      | 4.0  |           |      |
| S     |      |           |      | 4.0    |           |      |      |         | 16.0  | 20.0   | 26.2 | 27.4   | 24.1  | 32.0   | 12.0    | 8.3  | 16.0 | 4.0  |      |                        |      |      | 4.0       | 7.9  |
| MSS W | 4.0  |           |      |        |           |      |      |         |       |        |      |        |   |        | 4.0     |      |      |      |      |                        |      |      | 4.0       | 4.0  |
| SW    | 4.0  |           |      |        |           |      |      |         |       | 4.0    |      |        |   | 4.0    |         | 4.1  |      |      | 4.0  |                        |      | 0.4  |           |      |
| wsw   | 4.0  |           | 4.0  | 4.0    | 4.0       |      | 4.0  |         |       | 0.4    | 9.6  | 9.1    |   |        | 4.0     | 4.1  |      | 4.0  | 4.0  |                        |      |      |           |      |
| A     |      | 4.0       | 4.0  | 16.0   | 4.0       | 12.0 |      |         |       | 7.9    | 4.3  | 4.5    | 4.٦   |        |         |      | 16.0 |      |      | 4.0                    |      | 7.9  | 7.9       | 7.9  |
| WNW   | 20.C | 7.9       | 4.0  | J.E. U | 16.0 28.0 | 7.9  |      | 12.0    | 7.9   | 4.0    |      | 9.1    | 12.0  | 24.1   | 7.9     | 12.5 | 7.9  | 32.0 | 12.0 | 28,0                   | 16.0 | 4.0  | 28.0 16.0 | 16.0 |
| A Z   | 12.0 | 16.0      | 12.0 | 15.0   | 24.1      | 7.9  | 12.0 | 32.0    | 24.1  | 16.0   | 13.1 | 22.7   | 16.0  | 12.0   | 28.0    | 12.5 | 28.0 | 32.0 | 44.0 | 16.0                   | 28.0 | 24.1 | 24,1      | 32.0 |
| MNN   | 16.0 | 24.1      | 20.0 | 12.0   |           | 16.0 | 20.0 | 7.9     | 4.0   | 20.0   | 17.4 | 4.5    | 7.9   | 4.0    | 4.0     | 16.7 | 7.9  | 7.9  | 4.0  | 4.0 12.0               | 24.1 | 7.9  |           | 7.9  |
| CALM  | 32.0 | 36.0 36.0 | 36.0 | 24.1   | 24.1      | 32.0 | 52.0 | 24.1    | 7.9   |        |      |        | 4.0   |        |         | 4.1  |      | 7.9  | 7.9  | 7.9 20.0 16.0 20.6 12. | 16.0 | 20.C | 0         | 16.0 |
|       |      |           |      |        |           |      |      |         |       |        |      |        |   |        |         |      |      | ĺ    |      |                        |      |      | Į.        |      |

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|             |      |                               |      |      |  |      | Rel  | ative I | Relative Frequencies* of Wind Directions by Hour at 4.0 | icies* | of Wı | nd Dir | ection | s by H | our at | 4.0 m. |      |      |      |      |      |      |      |      |
|-------------|------|-------------------------------|------|------|--|------|------|---------|---|--------|-------|--------|--------|--------|--------|--------|------|------|------|------|------|------|------|------|
|             |      |                               |      |      |  | :    |      |         |   |        |       | (%)    |        |        |        |        |      |      |      |      |      |      |      |      |
| ž<br>Ž      | 10   | 02                            | 0    | 0.1  | 95   | 90   | 07   | 80      | 66  | 10     | 11    | 12     | 13     | 14     | 13     | 91     | 17   | 18   | 61   | 20   | 12   | 22   | 23   | 24   |
| z           | 3.2  | 3.2                           | 6.4  | 3.2  | 19.4   | 12.9 | 3.2  | 6.4     | 16.1  | 9.7    | 6.4   |        | 3.2    |        | 3.2    | 12.9   | 6.4  |      | 3.2  | 3.2  | 3.2  | 16.1 |      |      |
| ZZE         | 6.4  | 3.2                           |      | 12.9 | 6.4  | 6.4  | 3.2  | 3.2     | 3.2   |        |       |        |        | 3.2    | 3.2    |        | 6.4  |      | 6.4  | 3.2  | 9.7  | 6.4  |      | 6.4  |
| ZE          | 9.7  | 3.2                           | 6.4  | 9.7  | 6.4  | 6.4  | 3.2  | 9.7     | 1 911   |        | 3.2   | 3.2    | 3.2    | 6.4    |        |        |      |      | 3.2  | 6.4  | 6.4  | 6.4  | 3.2  | 6.4  |
| ENE         | 6.4  | 9.7                           | 3.2  |      | 3.2  |      | 3.2  |         |   |        |       | 3.2    | 3.2    |        | 3.2    |        |      | 3.2  | 3.2  |      | 6.4  |      |      | 3.2  |
| ш           |      | 3.2                           |      | 3.2  | 3.2  | 3.2  |      | 3.2     |   | 3.2    | 3.2   | 6.4    | 3.2    | 3.2    | 3.2    |        | 3.2  |      |      | 3.2  |      | 3.2  | 3.2  | 3.2  |
| ESE         |      |                               |      |      | 3.2  |      |      |         | 3.2   | 6.4    |       |        | 3.2    |        | 3.2    | 6.4    |      |      | 9.7  | 3.2  |      |      | 3.2  |      |
| SE          |      | 3.2                           |      |      |  |      |      | 6.4     | 5.2   | 3.2    | 9.7   | 9.7    | 9.7    | 3.2    |        | 9.7    | 6.4  | 3.2  |      | 3.2  | 3.2  | 3.2  | 3.2  |      |
| SSE         | 3.2  | Andrew Control of the Control | 9    | 3.2  |  |      |      |         | 3.2   |        |       |        | 3.2    |        | 6.4    | 3.2    | 3.2  |      |      |      |      | 3.2  | 3.2  | 3.2  |
| S           | 3.2  |                               |      |      | 1  | 6.4  | 9.7  | 3.2     | 16.1  | 22.6   | 29.0  | 22.6   | 22.6   | 35.5   | 29.0   | 9.7    | 12.9 | 9.7  | 3.2  |      | 3.2  | 3.2  |      | 3.2  |
| SSW         |      |                               |      | 3.2  |  | 3.2  | -    |         |   |        | 3.2   |        |        |        |        |        |      |      |      | 3.2  |      | 6.4  |      | 3.2  |
| SW          | 3.2  |                               | 3.2  | 3.2  |  |      |      | 3.2     |   | 6.4    | 6.4   | 3.2    |        | 3.2    |        | 3.2    | 3.2  | 3.2  | 6.4  | 6.4  | 2 2  | 9.7  | 3.2  | 3.2  |
| wsw         |      | 3.2                           | 3.2  | 6.4  | The state of the s | 6.4  |      |         |   |        |       | 3.2    |        |        | 3.2    | 6.4    | 6.4  | 9.7  |      | 9.7  | 3.2  | 3.2  | 6.4  |      |
| B           | 3.2  |                               | 3.2  | 6.4  | 6.4  |      | 3.2  | 12.9    | 12.9  |        | 3.2   | 16.1   | 6.4    | 12.9   | 6.4    | 3.2    | 3.2  | 16.1 |      | 12.9 | 3.2  |      | 12.9 | 6.4  |
| ANA         | 9.7  | 3.2                           | 5.2  | 3.2  | 6.4  | 4.9  | 3.2  | 12.9    | 6.4   | 9.7    | 9.7   | 3.2    | 6.4    | 6.4    | 6.4    | 6.4    | 16.1 | 3,2  | 16,1 | 6,4  | 9.7  |      | 3.2  | 6.4  |
| NZ.         | 9.7  | .0.1                          | 12.9 | 12.9 | 3.2  | 3.2  | 16.1 | 6.4     | 9.7   | 12.9   | 9.7   | 9.7    | 16.1   | 12.9   | 16.1   | 12.9   | 19.4 | 25.8 | 19.4 | 9.7  | 12.9 | 3.2  |      | 12.9 |
| B<br>Z<br>Z | 3.2  | 9.7                           | 9.7  | 9.7  | 6.4  | 9.7  | 3.2  | 3.2     | 6.4   | 9.7    | 3.2   | 3.2    | 9.7    | 3.2    |        | 16,1   |      | 12.9 | 6.4  | 9.7  | 12.9 |      | 6.4  | 6.4  |
| CALM        | 38.7 | 1.1.9                         | 41.9 | 22.6 | 35.5   | 35.5 | 51.6 | 29.0    | 19.4  | 16.1   | 12.9  | 16.1   | 9.7    | 9.7    | 9.7    |        | 12.9 | 12.9 | 22.6 | 19.4 | 22.6 | 35.5 | 41.9 | 35.5 |
|             |      | -                             |      |      |  |      |      |         |   |        |       |        |        |        |        |        |      |      |      |      |      |      | 7    |      |

• Note: Due to rounding, percentage totals do not equal 1000c.

## SUMMARY OF NON HOURLY DATA

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|                         |   | OCTOBER 19  |  |  |   |  |
|-------------------------|---|---|--|--|---|--|
|                         | Summarv of Ele  | ments with Non-hourly F   | requencies                             | of Observati   |   | <b>Q</b> E wropens a a                                       |
| Site                    | Element, Units and Exposure   | Description   | Number<br>o. Obs.                      | Minimum<br>Value                                     | Mean or<br>Total Value  | Maximum<br>Value   |
| site)                   | Evaporation <sup>3</sup><br>(in. at 4 leveis)                               | Piche (46.0 m)<br>Piche (26.5 m)<br>Piche (13.5 m)<br>Piche ( 0.5 m)            | 27<br>27<br>25<br>13                   | 0.018<br>0.012<br>0.006<br>0.006                     | 4.044*<br>2.823*<br>1.024*<br>0.335*                                    | 0.238<br>0.183<br>0.104<br>0.055                             |
| Albrook (Forest site)   | Precipitation from<br>Raingauge Network <sup>2</sup><br>(in, at 1.0 meters) | Gauge # } Gauge # 2 Gauge # 3 Gauge # 4 Gauge # 5 Gauge # 6 Gauge # 7 Gauge # 8 | 35<br>40<br>40<br>39<br>34<br>40<br>38 | 0.01<br>0.01<br>0.01<br>0.01<br>0.01<br>0.01<br>0.01 | 6.32*<br>10.53*<br>9.50*<br>10.12*<br>7.78*<br>8.42*<br>10.19*<br>8.16* | 1.41<br>1.71<br>1.68<br>2.42<br>1.58<br>1.35<br>2.16<br>1.33 |
|                         | Evaporation <sup>3</sup><br>(in. at 0.5 meters)                             | Fiche<br>Pan  | 28<br>28                               | 0.006<br>0.015                                       | 2.480*<br>4.259*  | 0.201<br>0. <b>443</b>                                       |
| Chiva Chiva (Open site) | Minimum Grass temp <sup>3</sup> ( <sup>O</sup> F at grass tips)             | None  | 21                                     | 65.0   | 70.0  | 74.0   |

\* Total Values

<sup>3 -</sup> Daily observations2 - Six hourly observations

| Security Classification  |                              |                      |   |
|--|------------------------------|----------------------|---|
| DOCUMENT CONTI   |                              |                      |   |
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